TOBACCO IN TURKEY

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IN
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PABLISHED BY

THE TURKISH STATE MONOPOLIES

İSTANBUL — 1965

Preface

Tobacco, having been used during previous centuries only for medical and incense purposes, has since become an unforsaken source of comfort for the human being.

The vivid imagination caused by the constant movement of the tobacco smoke has over the centuries produced such an overwhelming pleasure to mankind that addiction to tobacco has increasingly become more popular. Due to these facts tobacco has gained its present position in the vorld in the economic, commercial and financial fields.

This delicate plant with its magic and exquisite taste can only be grown in selected regions of the world. With its natural beauties and its superior tobacco growing potentialities, Turkey is one of the exceptional countries where tobacco flourishes under the most favourable conditions and acquires its excellent qualities.

Long experience and love for tobacco by the farmer, up to date knowledge and prevailing exceptional climatic and soil conditions have largely contributed in Turkish tobacco becoming an indispensable commodity throughout the world in the tobacco industry.

Apart from its exquisite taste, pleasant colour, and superior economic properties as a primary material of the industry, Turkish tobacco has scientifically been proven to be harmless to the health of human beings contrary to some theoretical claims made on all tobaccos.

The satisfaction derived from a single draw of a Turkish tobacco product equals all other pleasures.

History

Tobacco was first introduced into Turkey towards the end of the 16th Century. Although it is said that tobacco originated from the East and had been in use from time to time, this was never proved as a historical fact. Therefore the introduction of tobacco from the West was accepted as the beginning of tobacco activities and its extensive consumption in Turkey.

At the outset tobacco encountered strong opposition from the religious judiciary who issued their opinions against the use of tobacco, and consequently attempts were made to prohibit its consumption. Opposition against tobacco slackened though over the years and in 1903 its consumption became wide-spread. In 1621 smoking was prohibited and in 1631 this law was enforced with grave penalties inflicted on those who opposed this prohibition. After the death of Murad, IV, who was bitterly against smoking and who imposed grave penalties to those who did not comply with the ruling laid down by him, the prohibitions slackened and even the members of the religious-judiciary community declared that there were no religious objections against smoking.

Consumption of tobacco in Turkey was readily accepted and during the initial years tobacco was imported from abroad. In 1683 a tax was imposed for the first time on tobacco and its productin in the country was officially permitted. During the ensuing years different systems of taxation were applied to tobacco. On the other hand tobacco production in the country progressed and it gradually reached a high enough level to meet domestic demand and even to export. İt is impossible to determine

the exact date when tobacco took its place among the export products of Turkey, but it is known that this transaction started in the second half of the 18th century and at the end of the 19th century it reached as far as America.

In conjuction with the above, selling and work shops were established along the Golden Horn in Istanbul — being the base for all imports — and these enterprises formed the centre of the present day tobacco industry.

In 1862 a regulation was enforced prohibiting the import of tobacco from abroad and both growers and owners of workshops as well as merchants were subject to a new tax system.

In 1874 an enactment regulated all production, manufacturing and selling activities and a customs officer was appointed to each of the said premises.

In 1884 the privilege of exploitation of the tobacco monopoly was conveyed to a French Company * by a charter for a period of 30 years. This company improved the tobacco industry which until then was a rather scattered organization; tobacco factories and workshops in Istanbul, İzmir, Samsun and Adana were also established. This charter which should have expired in 1914 was extended for another period of 15 years by an agreement due to the Balkan War. In 1923 at the Congress of Economics which convened in İzmir it was unanimously decided to abolish the Regie and the concessions of its operations were repealed by a Decree of the Cabinet Ministers on July 30, 1924 whereby all its assets, rights and liabilities were transferred to the Government.

Subsequently on 26 February, 1926 a temporary tobacco monopoly was created for a period of five years and by an Act decreed on June 6, 1930 tobacco activities and the scope of the Monopoly were defined and its management entrusted entirely to the Government. The "Tobacco and Tobacco Monopoly Act" passed in 1938 relating to planting, buying, manufacturing and trading in tobacco, defines the present provisions.

*) Named "Memaliki Osmaniye Duhanları Müşterekül Menfaa Reji Şirketi,

A SMOKER OF THE SEVENTEENTH CENTURY

Agriculture

All tobaccos grown in Turkey are of the same genus - Nicotiana Tabacum. One exception is Hasankeyf tobacco, which belongs to the Nicotiana Rustica genus, and is grown in small quantities in the Gaziantep district.

Turkish grown tobacco can be classified into two different groups according to their physical make-up: plants with petiole leaves on the one hand and those with sessile leaves on the other. Tobacco with a sessile leaf is referred to as "kulaklı, yaşmaklı or basma," whereas the plants producing medium-size, broad winged leaves in this group are called "kabakulak". The petiole leaf is commonly referred to as "başıbağlı". There are however another types in the same group with a naked petiole which are called "yaşmaksız".

The botanical characteristics of the two groups of Turkish tobacco are very similar. The Italian tobacco scientist Gomez claims that those Turkish tobaccos which have petioles show predominant characteristics of the variety called N. Fruticosa, whereas the sessile leaf tobaccos have the characterictics of N. Macrophylla. Both varieties are obtained through cross-breeding with other N. Tabacum plants. According to another Italian scientist, Anastasia, these tobaccos were produced through cross-breeding of N. Havenensis, N. Brasiliansis and N. Purpurea varieties.

Turkish grown tobaccos are phenotypes of individual characteristics obtained over many years by natural selection, mutation under ecologic conditions and partly natural cross-breeding.

CLIMATIC AND SOIL CONDITIONS

As Turkish tobacco grows in different regions under somewhat varying climatic conditions the best results are usually obtained in moderate and fairly dry conditions, especially after transplanting.

Tobacco requires a considerable amount of sunshine during the growing stage of the plant and the curing of the leaves. It is therefore essential to have an excessive amount of sun shine. The average temperature per year is over 13° C, and during the growing stage the marginal limits of the temperature are between 20 and 28°C. The relative humidity on the other hand is not below 50%.

Tobacco is planted in altitudes of 150 to 200 meters above sea level. High quality tobaccos are grown on slightly sloping and sloping fields. The soils are of loamy-sands or sandy-loams type; not so deep and with a medium feeding power. Soils which contain a large quantity of lime are not suitable. The best and most sought-after soil is red and is shallow well drained, granular and friable, generally with a low acid reaction (pH between 6-7).

FERTILIZATION

The most important factor in tobacco production is the protection of quality.

Excessive amounts of nitrogen in the soil may increase the yield but at the same time it may also reduce the quality. The rate of nitrogen must therefore be kept at a level that will not affect the quality. The aroma and colour peculiar to Turkish tobaccos can be obtained in the soils with a low nitrogen and high potash content and adequate phosphates.

Turkish tobacco, being a relatively short bodied plant, generally grows in soils with medium fertility level and does not require much fertilization. To protect the high quality of the tobacco, fertilization must be carried out with utmost care and best results are obtained if small quantities of fertilizer are applied when necessary.

ROTATION

Rotation is not necessary provided fertilization is correctly carried out. Where there is enough land, however, or in cases of epidemic disease or harmful insects, rotation is recommended for a two or three year period. Legumes should not be planted as rotation crops for they increase the nitrogen content of the soil. Aromatic Turkish tobaccos are obtained particularly from those soils which are under constant tobacco cultivation.

SOIL PREPARATION

The site should be ploughed as deep as 15 to 20 cm. at the beginning of autumn when there are heavy rainfalls. This allows the penetration of the winter rainfalls, improves the physical qualities of the loamy soils under the influence of snow and frost and helps weed control. Deep re-ploughing follows later on in a down-ward direction of the slope to ensure god drainage and to eliminate any water-logging. Spring ploughing is done at least twice, depending on circumstances, but should not be as deep as the Autumn ploughing, i.e. not deeper than 10-15 cm. The site must be ploughed again prior to transplanting either with a plough or a cultivator. The soil is then made ready for planting by harrowing or by leveling it off even more if necessary. During tillage, care should be taken that the adequate moisture of the soil is maintained.

Each ploughing is done in a transverse direction to the previous one.

SEEDBEDS

Seedbeds should be protected from prevailing winds and should receive a considerable amount of sunshine. They should be situated away from vegetable gardens, water-logged and shady areas and the actual tobacco fields.

Normally the site of the seedbeds is at least five meters away from any of the aforementioned and in cases of disease and insect infested areas the seedbeds should be even further away.

The soil used in the seedbeds should not originate from vegetable gardens or tobacco fields. It should be obtained from heathery or virgin sites, and when digging up the soil, care should be taken not to penetrate deeper than 30 cm.

Both soil and aged manure are sifted through a sieve with holes of 1 cm., prior to using it on the seedbeds.

The combination is usually 3:1, soil: manure and should be thoroughly mixed by being overturned several times and kept in a heap. Some of the sifted manure is kept for use as top dressing.

The site chosen for a seedbed has to be dug with a spade first and cleared of all weeds and then leveled out. The fronts of the seedbeds have a protective wooden or brushwood fence, 20 to 30 cm. in height. The prepared site is then covered with a 8-10 cm mixture of soil and manure and smoothed over with a rake. The surface of the seedbed should always be raised approx. 15 cm above the level of the pathways.

The site has to be watered several days prior to sowing and left to rest.

The optimum date for sowing is 2 to 2.5 months prior to the date of transplanting. Sowing should take place on a mild day. A maximum of 1 gr. of seeds per sq.m. should be sown. Best results are obtained by mixing the required quantity of seeds with wood ashes. Germinated seeds should not be used and care should be taken that the sowing is completed in one single operation. After the seeds have been sown, the seedbeds are covered with a top dressing of 1 cm, lightly pressed down and then watered.

The top of the soil must be kept moist until germination has been completed. There is no need to use artificial fertiliser in the seedbeds prepared in accordance with the above mentioned conditions. In cases where the growth of the seedlings is too slow, artificial fertilisers can be used moderately.

Once the seedbeds have been sown and watered, they are covered with duraglass, ordinary glass, plastic or rush mats. These are lifted

during the sunny and hot hours of the day. To prevent the young seedlings from becoming too tall, the beds are ventilated, care being taken not to cool the air too much.

15-20 days prior to transplanting, the seedbeds are entirely uncovered during day and night, unless frost or hailstorms are likely. In this way seedlings become accustomed to external weather conditions, and by gradually reducing the water quantity they get used to drought. Weeding is done as needed. If necessary the stalk of the plant up to the leaves is covered with top dressing and watered to obtain well-rooted seedlings.

Each mature seedling is considered ready for transplanting when up rooted and wound around a finger without breaking. The mature seedlings are carefully selected and the taller plants called "guides" are discarded a few days prior to transplanting. Each seedling has to be pulled out individually without harming its roots. The seedbeds are adequately watered in the early hours of the day when transplanting takes place. Each seedling is carefully extracted and the holes are filled with top dressing to protect the uncovered roots of the neighbouring plants which are not yet ready for transplanting. All seedlings have to be transplanted the day they have been removed from he seedbeds, and care should be taken that they are kept in a cool shady location until transplanting takes place. The seedlings are removed from the seedbed in three sessions to take care of the plants that are not yet ready for transplanting. Once all seedlings have been uprooted and transplanted the seedbeds are broken up.

TRANSPLANTING

Furrows into which the seedlings are transplanted, have to be made either with the plough or the hoe depending on the soil and weather conditions as well as the characteristics of the tobacco type. The direction of the furrows should be such that best exposure to the sun is obtained and erosion of the soil is prevented. Air currents due to prevailing winds also have to be considered. To avoid any loss of moisture of the soil, furrows should only be opened up on the same day the seedlings are ready for

transplanting. The space between the furrows and the plants on the same furrow differs according to the tobacco types. The following table gives a rough idea of the measurements:

Type	Space between the furrows cm.	Space between the plants cm.	Plant population per 1000 m²
İzmir	40 cm	12-15	16,000 - 20,000
Samsun-Bursa	40	20	12,500
Malatya-Trabzon	50	20	10,500

The transplanting dates are determined by taking into consideration the duration of growth, priming and curing. The approx. starting dates for transplanting in the various regions are as follows :

Region	Commencement of transplanting
İzmir	early April
Black Sea and Marmara	mid May
Eastern Anatolia	mid June

Planting can last from 30 to 45 days according to circumstances. To obtain a high quality crop early dates are recommended for transplanting. Dibbles are generally used for transplanting. In some regions water is poured onto the newly planted seedling whereas in some parts of the İzmir region seedlings are dry planted. In the region of Eastern Anatolia the seedlings are planted into pre-watered furrows. The priming process is facilitated if the planting is done at intervals. Between the planting and priming dates tobacco fields have to be cultivated two or three times. The first cultivation takes place 10 or 15 days afer planting and is usually shallow. The second and third cultivations follow after the rainfalls to prevent the surface of the soil from hardening and to cover the lower parts of the stalk with soil.

Generally topping is not required on Turkish tobaccos. This is done only on types such as Trabzon, Edirne and Bitlis.

HARVESTING

There is a very close relation between good quality of tobacco and the picking of the leaf at the correct stage of maturity. In assessing ripeness of the leaf, the colour change from green to yellow between the veins, at the edges and the tip is the most significant factor. Moreover, yellowish swellings appear on the face of the leaf and the edges as well as the tips turn downwards. The leaf takes a more horizontal position in relation to the main stalk. These characterictics however change slightly from one tobacco variety to the other.

2 to 3 months after planting, ripening commences and reaping will have to start immediately. The leaves are picked in successive primings, starting at the bottom of the plant and steadily progressing upwards in accordance with their maturity. Each group of leaves picked at the same priming is called "hand". Leaves gathered in the same hand should show the same degree of maturity, be of similar size and form.

The various hands are set out below in their consecutive order of priming.

Sand leaves	(Dip)
Bottom leaves	(Dip üstü)
First middle leaves	(I. ana)
Second » »	(II. ana)
Third » »	(III. ana)
Lower top leaves	(Uç altı)
Top leaves	(Uç)

The sand leaves are not mixed into the crop. They have to be primed however and then burned.

The principal part of the crop consists of the middle leaves, however the best quality Turkish Tobaccos are obtained from the top and lower top leaves provided that they are primed at the right time and cured in the right conditions.

The most suitable time for priming is the early morning hours, i. e. between dawn and 11:00 a. m. Priming can also be carried out however after 4:00 p. m. if need be.

After harvesting the stalks of the plant should be up - rooted and discarded as prescribed by law.

STRINGING

All leaves which have been primed should be kept in a shady place and the stringing operation should be carried out immediately in order to avoid over-heating.

A flat needle 35-40 cm long, and 0,5 - 0,8 cm. wide, is used for stringing. When the needle is full of leaves, the latter are pushed on to a string attached to the needle and thus garlands are formed. The length of the garlands is 120-140 cm and each garland contains 500 to 1500 leaves depending on the types.

Tobacco leaves have to be primed and strung on the same day.

In the Eastern region of Turkey two or three leaves are tied together by their petioles with a type of rush and are braided like a tress. This operation is called "şeran".

CURING

Prior to the actual curing the garlands of tobacco are allowed to wilt in a shady place for 24 hours. This wilting process is either done by piling the garlands into a heap or by hanging them up. On the first day, after the leaves have wilted, they are exposed to the sun only until noon; on the second day from noon till evening and from then on for the whole day.

The curing period may vary from 7 to 15 days depending on the weather conditions. At the end of this period the mid ribs of the leaves have dried out.

Although other curing methods can also be used for different tobacco types, Turkish tobacco is essentially sun cured. The garlands are strung during the curing operation either on racks, wagons, sheds depending on the circumstances in each region.

Curing on racks is only practised in the İzmir region. Racks are usually 60-80 cm. high, made out of wood with stay - and side - wires stabilizing them to the ground and set apart according to the length of the garlands. On these vertical racks provision is made for the garlands to hang parallel by means of staples. The garlands, being tied to reed sticks, are placed on these staples. The space between the garlands should be adjusted in such a way that all the leaves are equally exposed to the sun and that the air can circulate freely among them.

The garlands hang on these staples for 6-12 days and afterwards they are spread on gravel or sandy ground. The sides of the garlands are alternatively exposed to the sun for a couple of days each. This process is called "sergi".

Immediately following this operation, approx. 100 to 200 garlands, tied to reeds are piled one upon the other in the early morning hours when the tobacco leaves are moist. This is commonly known as temporary heaping.

10 or 15 days later, the temporary heaps are unpiled, the garlands untied from the reeds and put into heaps 1 - 1.5 m. high. This operation is called the main heaping. Tobaccos are left in these heaps until they are baled.

Since the curing period coincides with the rainy season in the Marmara, Black Sea and Eastern Anatolia regions, the curing is done by the wagon system. These wagons are part of the permanent installations and since they can be moved quickly under sheds when it rains, the tobacco is prevented from getting wet. This installation consists of sheds, wagons and rails. Sheds: buildings with three walls and a tiled roof. The open side faces South. Wagon : wooden frames the measurements of which are 3 - 3.5 m. in width and 1 - 1.5 m. in length. The wagons are

placed on rails to facilitate the movements outside of the shed. These rails are set parallel in accordance with the width of the wagons and at a height of 50 to 60 cm. from the ground.

They are horizontally outside the shed and have special tilting facilities inside to enable the wagons to stand upright. This is a space saving device.

The garlands are fastened and stretched onto the hooks or staples on both sides of the wagons and then only are the wagons placed onto the rails.

In the Black Sea region another wagon system is being used by which the racks stand upright on the rails. This method is commonly referred to as "salaş".

This method is especially used in the Black Sea region. Tobacco cured this way is then made into bunches. Both ends of the garlands are tied together (usually 2 - 5 at once) according to their lengths and size of leaves. These bunches are then hung in wind - sheltered and sunny places, at 2 - 2.5 m. above the ground. After having been exposed to the sun for 8 - 10 days the bunches are hung close to each other under the roof of the shed until they are baled.

BALING

The cured tobacco leaves after classification into "mahsul" (upper grades), "görmez" (lower grades) and useless leaves, which are either gathered into bundles or are cut into small garlands for baling.

The tobacco leaves will have to be handled at a moisture of 18 - 20 % humidity. If the relative humidity of the air complies with these requirements, the leaves will automatically absorb the moisture from the air. In the negative case, the tobacco leaves will have to be conditioned according to the humidity requirements. This can be done in various ways.

The bales made by the farmers are called unprocessed or farmers' bales. These bales can be made in four different ways: "kalıp", "dizi" "İskenderiye", and "Rumeli" methods.

"Kalıp" method is the baling process used in the İzmir region. The garlands are taken from the heap, unsuitable leaves separated from them, and then cut into equal lengths according to the dimensions of the bales. 4-8 garlands, depending on the sizes of the tobacco leaves, are laid parallel to each other in one layer into the wooden cases called kalıp. The butts of the leaves on each side of the case should face outwards. During stacking of the leaves into the case, they are pressed down 3 - 5 times. The weight of each bale should be in the region of 60 kgs.

"Dizi" method is used in the Samsun or Bafra districts. The garlands of tobacco leaves are selected and cut into the required lengths according to the size of the cases. Two garlands only are placed in one layer, the tips slightly overlapping in the centre - the width of the bale being in accordance with the size of the leaves. Pressure is applied 2 - 3 times when stacking. The weight of each bale should be approx. 20 kgs.

The Rumeli or Iskenderiye methods necessitate that the leaves should be in bundles (pastals) when stacked inside the bale. Tobacco seperated for this purpose has been roughly classified and then bundled (15-20 leaves) together with the butts pointing into the same direction.

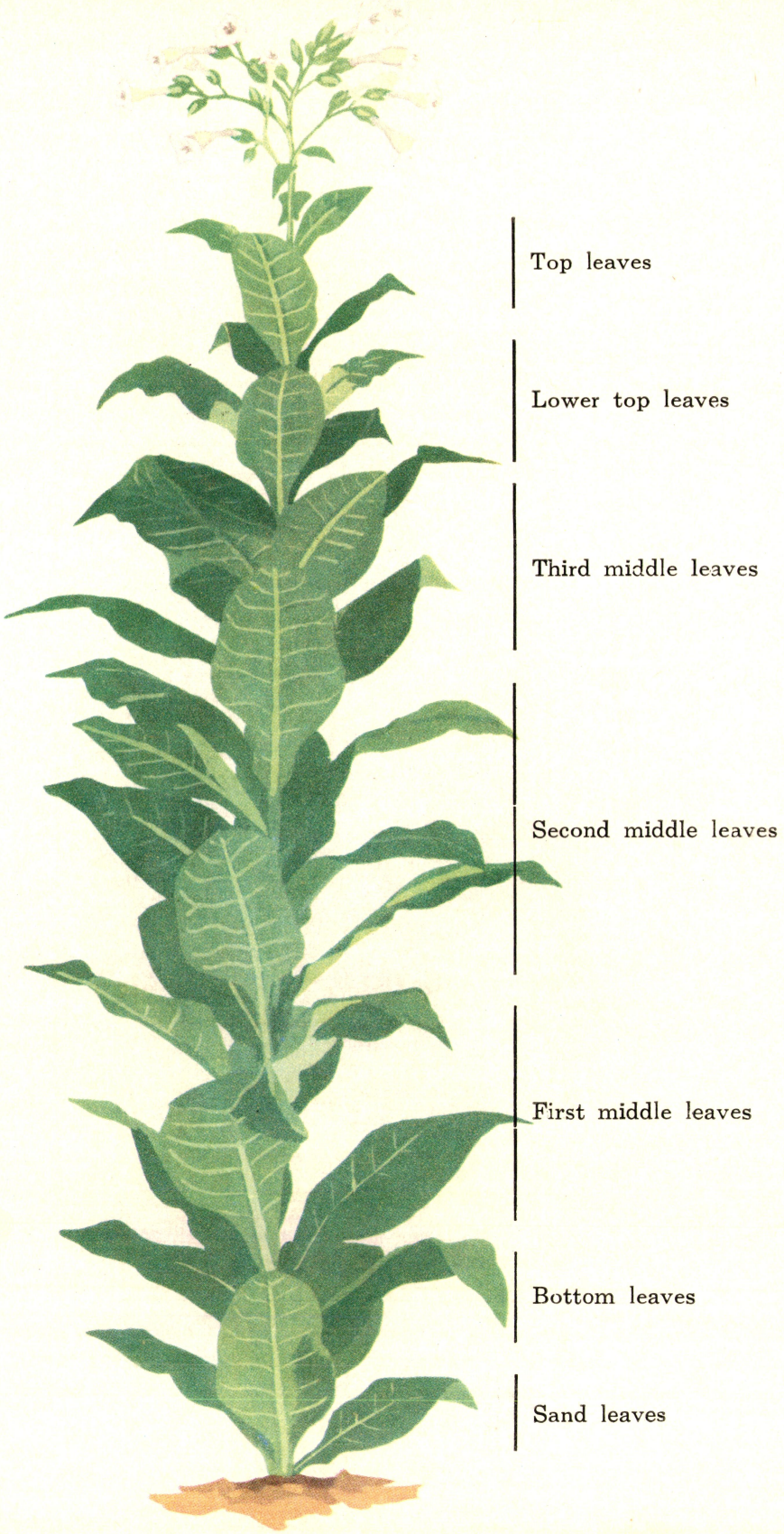
Tobacco baled according to the Iskenderiye and Rumeli methods are identical to the commercial form of bales mentioned in the "Processing and Aging" chapter of this book.

While baling the farmers have to separate the useless leaves (ihraklık) which are being burned by the Turkish State Monopolies.

TABLE I

Yield of Turkish Tobaccos per 1000 m²

Varieties	Yield per 1000 m²
İzmir	60 — 80
Samsun - Maden	40 — 60
Samsun - Canik	80 — 100
Bafra	60 — 80
Alaçam	70 — 90
Trabzon	100 — 120
Taşova	70 — 90
Basma (G.H. Köy)	50 — 70
Düzce	70 — 90
Hendek	100 — 120
İzmit	60 — 80
Bursa	80 — 100
Edirne	100 — 120
Balıkesir	100 — 120
Malatya - Adıyaman	100 — 130
Yayladağ	100 — 120
İskenderun	100 — 120
Bitlis, Muş, Şemdinli	80 — 100
Pazar Cigar tob.	80 — 100
Tombac	120 — 150


Top leaves
Lower top leaves
Third middle leaves
Second middle leaves
First middle leaves
Bottom leaves
Sand leaves

Varieties and their characteristics

Since the introduction of tobacco into Turkey, the production of this crop has been suitably distributed among the various regions of the country in accordance with climatic and soil conditions. Through the course of time and under the influence of ecologic and economic conditions, tobacco types with stable characteristics were created and as a result of this, the tobacco varieties of today and their producing regions have been well determined.

These varieties are distributed among the following four regions:

Aegean
Black Sea
Marmara
Eastern

The Aegean region producing the İzmir variety, is located in the Western part of Anatolia, having Mediterranean climate. The ideal harmony between the climatic conditions and soil composition of this wide spread region constitute the best means for the world famous and most sought after aromatic tobaccos. This region also produces the world renown Turkish grapes, figs and several other crops.

The tobacco types grown in the Akhisar and Gavurköy districts of this region are unequalled, especially with regard to their distinctive aroma.

The Black Sea region lies in the North of Anatolia and encompasses the middle and eastern parts of the Black Sea shores. The soil in the centre of the Black Sea region is most suitable for the growing of best tobacco varieties, both in view of climatic and soil conditions. The most

renown varieties of tobacco are produced in this region, known under the name of Samsun, Bafra, Alaçam, Sinop, Gerze, Taşova and Gümüşhacıköy. On the other hand the Eastern part of the Black Sea region due to its moderate climate, high rate of precipitation and humidity, nature and structure of its soil, is also suitable for tobacco growing. The Trabzon and Artvin cigarette type and Pazar cigar type tobaccos are all produced in this region.

The Marmara region consists in the area surrounding the Marmara Sea, and as the climatic and soil conditions alter considerably within short distances, tobacco varieties of different types and characteristics are obtained here as in the Black Sea region. These varieties are named after the districts in which they are produced: Hendek, İzmit, Balıkesir, Edirne, Bursa and Düzce.

The Eastern region includes all of the tobacco growing districts in the Eastern and South-Eastern regions of Anatolia. The varieties grown under greatly varying climatic conditions which are prevalent in this large region show rather great differences in their characterictics. The principal varieties of this region are called Bitlis, Şemdinli, Adıyaman, Yayladağ, Malatya, İskenderun, Mardin (Gurs) and Bahçe. Tombac tobaccos (water pipe tobacco) are also grown in the Southern parts of this region.

Some of the chemical characteristics of the tobacco varieties grown in Turkey are shown in Table II.

The following represents a study of the characteristics of the main varieties of tobaccos grown in Turkey. One of the general characteristics of Turkish tobacco is its preserving ability of casing and flavouring additives. The relative measurements used for describing the particularities of each variety are in comparison only with all varieties of Turkish tobaccos. When for example the term "big, large", "medium" and "small" is used for the respective leaf sizes, the largest or smallest leaves of Turkish tobacco are taken into consideration. Otherwise, if the largest leaves of tobacco grown in Turkey were compared with other types of tobacco the world over, they could only be referred to as "medium size" or "small size".

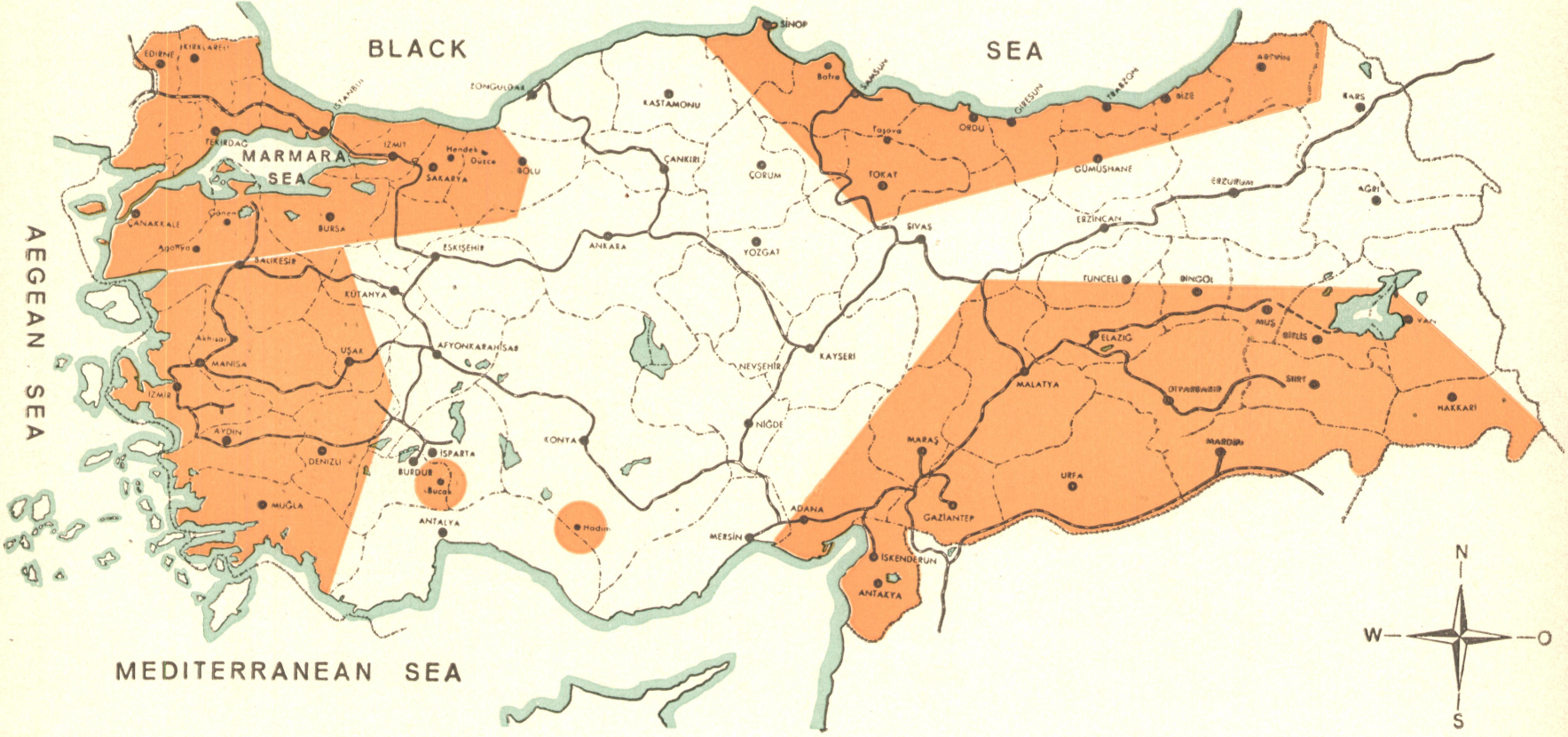

BLACK SEA
MARMARA SEA
AEGEAN SEA
MEDITERRANEAN SEA
EDIRNE
KIRKLARELI
TEKIRDAG
ISTANBUL
ZONGULDAK
KASTAMONU
SINOP
Boyabat
Samsun
ORDU
GIRESUN
TRABZON
RIZE
ARTVIN
KARS
IZMIT
Hendek
Duzce
BOLU
SAKARYA
CANKIRI
CORUM
TOKAT
Tasova
GUMUSHANE
ERZURUM
AGRI
Gonen
BURSA
ERZINCAN
GANAKKALE
Ayvalik
BALIKESIR
ESKISEHIR
ANKARA
YOZGAT
SIVAS
KUTAHYA
TUNCELI
BINGOL
MUS
BITLIS
VAN
Akhisar
MANISA
USAK
AFYONKARAHISAR
ELAZIG
KAYSERI
NEVSEHIR
MALATYA
DIYARBAKIR
SIIRT
HAKKARI
IZMIR
AYDIN
NIGDE
MARAS
MARDIN
DENIZLI
ISPARTA
BURDUR
Bucak
KONYA
URFA
MUGLA
ANTALYA
Hadim
ADANA
GAZIANTEP
MERSIN
ISKENDERUN
ANTAKYA
N
W
O
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TABLE II

Some of the chemical characteristics of the Tobacco varieties

Variety	Nicotine %	Protein N %	Total reducing substances %	Resins %	Ash %
İZMİR Gâvurköy	0.75	1.10	19.50	5.85	12.50
İZMİR Akhisar	0.60	1.15	19.00	5.75	12.70
İZMİR Ligda	0.55	1.25	17.50	5.10	13.30
İZMİR Muğla	0.65	1.10	17.85	5.40	13.20
İZMİR	0.75	1.20	16.65	5.35	13.35
SAMSUN Maden	0.70	1.50	11.15	4.30	13.30
SAMSUN Canik	1.25	1.70	7.85	4.45	14.60
SAMSUN	0.75	1.60	10.40	4.90	13.00
BAFRA	1.15	1.60	10.50	5.10	14.85
ALAÇAM	1.05	1.70	9.40	5.15	14.50
TRABZON	3.85	1.65	2.90	4.80	14.45
ARTVİN	1.90	1.40	11.60	4.60	14.50
TAŞOVA	0.90	1.30	17.15	4.30	14.00
TOKAT	0.85	1.40	17.45	4.30	14.05
GÜMÜŞHACIKÖY (Basma)	1.20	1.75	10.70	6.40	11.70
DÜZCE	0.65	1.65	14.40	5.40	12.80
HENDEK	1.30	1.50	10.50	5.25	13.75
İZMİT	1.30	1.45	10.70	5.60	14.70
BURSA	1.10	1.45	12.25	7.10	14.10
BALIKESİR	1.55	1.50	12.15	5.55	14.90
EDİRNE	1.60	1.55	8.20	5.70	14.70
ADIYAMAN	2.05	1.00	12.40	6.20	16.00
MARDİN-Gurs	1.35	1.10	13.60	6.80	15.70
YAYLADAĞ	1.50	1.35	12.95	6.75	15.80
BİTLİS	1.70	1.05	21.80	5.90	15.95
ŞEMDİNLİ	1.75	1.00	12.25	7.25	15.65
İSKENDERUN	2.10	1.35	10.55	6.70	16.10

TABLE III

Nicotine Content by Groups

Groups of Percentages	In products of :				
	Aegean region %	Black-Sea region %	Marmara region %	Eastern region %	total %
0.25—0.49	12.31	—	—	—	6.83
0.50—0.74	53.84	14.79	18.47	—	36.70
075—0.99	30.43	19.71	18.56	4.62	25.25
1.00—1.24	3.42	25.92	8.93	1.41	10.70
1.25—1.49	—	16.99	42.22	27.04	11.20
1.50—4.74	—	22.78	11.82	66.93	9.32

İzmir

This tobacco variety is produced in the İzmir, Manisa, Muğla, Aydın, Denizli and (parts only) Balıkesir districts of the Aegean region.

This variety has small, slightly broad, sessile and basma type leaves. Their texture is thin and elastic, the veins are fine and withstand well mechanical processing. Their colour is either yellow or light yellow. Some of the top leaves show dark coffee brown dapples of aroma. The taste of this variety is distinguished by its extreme mildness and sweetness and it has a strong and special aroma. This variety, being unique among all other tobaccos grown in the rest of the world, is extensively used for the improvement of cigarette blends. As the tobacco of this variety improves the taste of strong and bitter tobaccos, it has a multiple effect on the blends, and due to heir excellent qualities it increases the taste of the cigarettes.

This tobacco is the principal variety in demand the world over by manufacturers of various kinds of cigarettes, and it is also suitable for pipe tobacco blends. The most aromatic types of İzmir tobaccos are produced in the Gavurköy and Akhisar districts. Tobacco produced, however, in the Ligda district near İzmir, are lighter in colour, thinner in texture, but bigger in size.

Tobaccos from the Aegean region are well known to be of low nicotine and protein content on the one hand and of a high sugar content on the other. The average nicotine content is lower than 1% and sometimes as little as 0.25%. The tobacco leaves have a very high hygroscopicity due to their small cells and close texture.

The soils of this region have different characteristics varying from one place to another. The basic composition of the soil is derived from sandstone up to volcanic and sedimentary rocks. In some places, however, there are also sandy and loamy alluvial soils. The top layer of the soil in this region is then generally shallow, grayish or red-brown in colour, sandy and loamy, granular, friable and shows a low acid (pH) reaction.

Generally speaking the climate of this region can be classified as mediterranean. The summers are therefore usually hot and dry. With few rainfalls during the growing season, the average temperature is 22,8°C, total rainfall 97.1 mm and the relative humidity 57 %.

The farmers stack their tobaccos in bales of a 50-60 kgs. capacity, called "kalıp". This is also commonly referred to as unprocessed baling. The bales of processed tobacco on the other hand are called "tonga". Tongas weigh either 45 or 60 kgs.

Due to its great industrial value and increase in demand the production of this variety is rising each year at present. It constitutes over half of Turkey's entire crop.

İZMİR 1 : 1

Samsun - Maden

This is a world-wide known variety which grows in the centre of the Black Sea region, especially on the rolling hills and gently sloping fields around the Samsun district.

The leaves of this variety are small sized, narrow winged and ovate. Their texture is very thin and elastic and the veins are so fine that they are practically invisible. The face of the leaf is slightly wavy and the colour is bright from light red to red. Maden tobacco has all the properties of high quality tobacco as well as a mild, sweet and homogeneous taste, and a special pleasant aroma. The tobaccoos give a mild, sweet and exquisite taste to the blends in which they are used. It is out of question to prepare a high quality Turkish type blend without adding Maden tobacco. When smoked by itself they have a sweet and satisfying taste as well. The special aroma is present while the tobacco is still in leaf shape and also when cut.

While the Maden tobaccos contain a very small percentage of nicotine (less than 1 % in average) they have a high sugar content. They also have a high combustibility and filling capacity. The farmer who in this region is only handling tobacco, gives his utmost care solely to the production of this variety and this resulted in the protection of high quality tobacco.

Tobaccos grown at Evkaf and Vezirköprü - Havza districts resemble in type and quality the Maden variety.

The soils of the regions where this variety grows, consist of fine, olive coloured sands, interspersed with stones, schistous and calcerous

in nature. The top soil is shallow, 8 - 15 cm, greenish brown or brown coloured, varying between loamy sands and loams, granular and with a neutral-alkali reaction.

The climatic conditions during the growing season of the tobacco are as follows: average temperature 21,6° C, total rainfall 172.6 mm. and relative humidity 74 %.

The farmers stack their tobaccos in the "dizi" method, the weight of each bale varying between 15 - 20 kgs. When they are re-baled after processing into tongas for commercial purposes, each of them weigh 20 - 25 kgs.

SAMSUN - MADEN 1 : 1

Samsun - Canik

This variety is produced in the hinterland of Samsun and in the area just beyond the production belt of Maden. Being scattered between Maden and Çarşamba, this tobacco variety is mostly produced on the rising slopes located on the west side of the delta of the Yeşilırmak River.

The leaves of Canik tabaccos are small sized, broad winged and ox-tongue shaped. The texture and veins of these leaves are fine as well as highly elastic and durable. Their bright colour is from light to dark red. Their taste is satisfying an sweet and has a slightly spiced specific aroma, but the Sıtmasuyu type however has a strong and definite aroma. The Canik variety has therefore a worldwide reputation among aromatic tobaccos. These tobaccos are necessary for high quality blends due to the above characteristics. They have also a high combustibility and filling capacity.

In view of their taste they can be blended in certain proportions with cigar fillers. They add sweetness to the cigars and eliminate the harshness of immature cigar fillers, increasing their taste quality.

Their 1.25 % nicotine content gives to the taste a slightly satisfying character.

The type of this variety produced in the Çarşamba district resembles the above mentioned Canik type, inasmuch as its physical characteristics and taste are concerned.

The soil of the region where these tobaccos are produced is broken land and covered with brown forest earth. The actual consistency of the soil is the same as the soil of the cultivation area of the Maden variety.

As to the climatic conditions for the Canik variety during the growing stage of the tobacco the average temperature is 21.4° C, total rainfall 218.3 mm. and average relative humidity 75 %.

Çarşamba has the same average conditions, but a total rainfall of 264 mm.

Farmers stack their tobacco in the "dizi" method. Each of the bales average in weight between 15-20 kgs. Commercial bales after processing are in small tongas and weight 20-25 kgs each.

SAMSUN - CANİK 1 : 1

Bafra

This tobacco variety which is grown in the central Black Sea region and in the producing districts of Bafra and Alaçam, has been considered as one of the most famous varieties of the world.

The leaves of the Bafra tobacco are small and partly medium sized, narrow winged, heart shaped and ovate. Their texture is thin, elastic and durable. The leaves have fine veins and slightly wavy surfaces. They are bright in colour from red to dark red. Their taste is sweet and from slightly satisfying to satisfying.

The best examples of this tobacco are grown on the slopes surrounding the Kızılırmak River. Especially those tobaccos which have been produced in the Örencik. Kozağzı, Tosköy and Martıkale villages have a highly aromatic property.

The aromatic types of Bafra tobacco give a pleasant fragrance to the blends and enrich their taste. The Bafra variety, being a satisfying, aromatic and pleasant tasting tobacco, stands in top position of rare tobaccos which can be smoked by itself. This tobacco is as important for blends as is the Samsun variety and is one of the essential varieties which are used in blends of cigarettes to obtain a high quality.

It has commonly been accepted by leading foreign tobacco experts that these tobaccos are in indispensable part of perfect blends. In high and medium blends they provide the necessary harmony between strong and mild tobaccos, regulating the taste as well.

Alaçam tobaccos are a slightly different type of Bafra variety. The surfaces of their leaves are waved even more in appearance. Their tex-

ture is a little thicker than the Bafra leaves and their taste is not as high quality.

The nicotine content of Bafra tobaccos is in the region of 1%. They have also a good combustibility and filling capacity.

The area where thesee tobaccos grow is very rough and the earth consists of brown forest soil or podzolic soil. The top soil is dark grayish brown, loamy clay, granular, calcerous and between 7—15 cm in depth.

The average temperature during the growing stage is 21.4° C, total rainfall 199.9 mm. and average relative humidity 76%.

Farmers stack their tobaccos in the dizi method, each bale weighing from 15-25 kgs. After processing the tobaccos are baled in small tongas which weight 25-25 kgs.

BAFRA 1 : 1

Sinop

This variety is grown in the Sinop and Gerze districts of the central Black Sea region. Their leaves resemble those of the Bafra variety, but they can easily be identified in view of the fact that they are not so clearly ovate as the latter ones. This variety has small and medium sized, slightly ovate and narrow winged leaves. The texture of the leaves is thin and elastic. They are light red or red in colour and have fine veins. Their surface is not wavy as the Bafra leaves.

Although not so exquisite as the Bafra tobaccos their taste is satisfying and sweet. They make however a good cigarette filler and harmonize the blends made out of strong and mild tobaccos. This variety of tobacco is necessary for different kind of blends and have arather high combustibility and good filling capacity.

The greater part of this tobacco is raised in the vicinity of the Sinop district and the rest at Gerze. The tobaccos raised at Gerze are similar to the Sinop variety. The former, however, are of a somewhat higher quality than the latter. The total production of his variety forms only a small part of the over all tobacco production.

The surroundings of the Sinop and Gerze districts have chestnut soils and generally a rough, uneven surface. The principal consistent of the soil is marly limestone under which there is a layer of either limestone or claystone. The top soil is lomay-clay dark grayish brown in colour, rather shallow, granular, calcerous and friable.

Average temperature during the growing stage is 21.2° C, total rainfall 172.6 mm. and average relitve humidity 74 %.

Farmers bale their tobacco in the "dizi" method, each bale weighing approx. 15-25 kgs. After processing, commercial bales (small tongas) are made each weighing approx. 20-25 kgs.

Sinop, Gerze tobaccos can be processsed together with Bafra/Alaçam tobaccos under the name of Bafra blend.

SİNOP 1 : 1

Trabzon

These tobaccos are raised in the vicinity of the Trabzon and Akçaabat districts, Eastern Black Sea coastal area.

Their leaves are big, broad and with medium wings. They have very thin and highly elastic texture, from light red to red bright in colour. They have a very strong taste and are used in blends in order to give them more strength. They also give them a more pleasent colour. It is significant for the blends containing small leaves and high amounts of scraps to incorporate this variety due to its good cutting property and harmonizing capabilities. They give especially to the mild and tasteless (not sweet) blends more satisfying character.

Their combustibility and filling capacities are high. Their nicotine content is also the highest among all Turkish grown tobaccos - average of 3.85 %. It should however be noted here that the high nicotine content has deliberately been raised to this level after many years of study and research. The sugar content, however is very low.

Tobaccos with different characteristics are being grown in the area called Artvin, which lies at a high altitude to the East of Trabzon. This type has medium to big size leaves, slightly ovate in shape and narrow wings. Their colour ranges from light yellow to light red. This type is cultivated at Artvin, Borçka and Ardanuş. Their taste is generally strong, but especially the leaves of a lighter colour have a satisfying taste. They have a thin and elastic texture. Their combustibility an filling capacity is good. To some extent, they can substitute Trabzon tobaccos in the blends.

The Trabzon area has a rough, uneven surface (broken land) and red podzolic soils. The principal constituents of the range from sandstone to volcanic and sedimantary rocks. The top soil has a grayish brown colour, is of sandy loams type and shows an acid reaction.

Average Temperature during the growing stage is 21.3° C, total rainfall 217.0 mm. and average relative humidity 76 %

Farmers bale their tobaccos in the Iskenderiye method - each bale being approx. 30 kgs. After processing they are again stacked into 30 kgs. Iskenderiye bales.

TRABZON 1 : 2

Taşova

These tobaccos are raised in the cultivation districts of Erbaa, Niksar, Taşova and Tokat at the south of the Black Sea coastal area.

The leaves are medium size, broad and medium winged. The texture is fairly thick, elastic and resistant to stress. The colour is light yellow or yellow and rarely light red.

Generally they have a mild and sweet taste. Tobacco leaves with a light red colour are of a rather satisfying taste; they contribute to the mild and sweet taste of blends and improve their colour as well. This type of tobacco is very popular in Central Europe due to its special taste.

Another type of these tobaccos grown around the Tokat district is called "Topbaş", however it is still of the same variety. Topbaş tobacco leaves are broad on the lower half and narrow winged. Their texture is medium thick, elastic and durable. Their taste does not differ from all other Taşova tobaccos.

Compared with all other producing areas of Taşova, Erbaa yields the higest qualit yand quantity of variety. Tobacco is produced here on rough, uneven surfaces (broken lands); on one side bordered by the Yeşilırmak River and on the other by the Kilit Brook.

Taşova tobaccos have a high hygroscopicity and good combustibility, however a moderate filling capacity. Their nicotine content is in the regin of 1 %, and the sugar content is the same as in the İzmir variety tobaccos, however sometimes higher. These tobaccos which have a very high industrial value, show homogeneous chemical composition, in one

year's crops as well as in the crops of previous years from all the various production areas.

The soil in which this variety is grown has a rough, uneven surface (broken lands) which can be classified into two slightly different groups according to their physical structure: One of them has chestnut whereas the other has brown coloured forest and podzolic soils. The top soil is the same in both groups. Regarding the principal characteristics, the soil is grayish brown in colour, loamy, granular, calcareous and shallow.

Average temperature during the growing stage is 17.8° C, total rainfall 80.1 mm. and average relative humidity 54%.

Farmers bale their tobaccos in the İskenderiye method, each bale weighing approx. 30 kgs. After processing, the tobaccos are stacked again into İskenderiye bales, the same weight. However, also be baled into 20-25 kgs small tongas.

TAŞOVA 1 : 1

Basma

This variety grown in the tobacco producing area of the Gümüşhacıköy district, of the Black Sea region. İt grows on the gently sloping fields of the hilly countryside, and far away from the sea coast. It is well known for its pleasant aroma which can even be noticed while the tabacco is still in the field. The name of this tobacco is derived from the Turkish word "basmak" (to press) i.e, overlapping leaves of the "pastals" (a kind of bundle) are pressed together by hand so that they stick to each other.

The Basma variety has sessile, small sized leaves being broader of their upper half. Their lamina is directly attached to the main stalk and their texture is moderately thick, elastic, soft and durable. They give the feeling of velvet when touched. Their colour is light yellow, yellow and light red, theis surface is wavy and the edges of the leaf are laced. Their taste is mild, sweet and aromatic. They are used especially to give fragrance and sweetness to the blends. These tobaccos have a good combustibility and moderate hygroscopicity as well as filling capacity. Nicotine content amounts to approx. 1 %.

The main elements of the physical strutture of the soil where these tobaccos are grown have come into existence through the accumulation of loamy soils in the low valleys and due to the fractination of calcareous or basilitic rocks. The top soil is reddish brown or pale brown in colour and consists out of clay-loams is granular, friable, calcareous in character and medium in depth.

Average temperature during the growing stage is 19.7°C, total rainfall 96.9 mm. and average relative humidity 58 %.

These tobaccos are only grown in the limited areas of Gümüşhacıköy, Gümüş, Maden and Ovacık.

Farmers bale their processed tobacco in pastals (sıra pastal) and in the Rumeli method, each bale weighing approximately 15-25 kgs. depending on the size of the leaves. After processing commercial bales are made in the form of small tongas which weigh 25 kgs. each...

BASMA 1 : 1

Bursa

These tobaccos are grown in the districts of Bursa, İnegöl, Orhangazi, M. Kemalpaşa, Mudanya, İznik, Karamürsel, Bilecik, Yenişehir and partly at Geyve, all of which are in the Marmara region.

The leaves of this variety are of medium, partly small size, narrow winged and heart shaped. Their texture is slightly thick, elastic and resistaint to stress. Their colour is from light red to red. The midribs and main veins of the leaves are slightly thicker than their lamina.

The light coloured leaves are milder in taste, whereas the darker ones are rather satisfying. These tobaccos have a special aroma of their own which resembles the smell of apricots.

Bursa tobaccos add a satisfying and sweet taste to the blends. They also increase their cutting property and improve the uniformity of the colour within the blends. Since these tobaccos can adopt themselves to the peculiarities of the various blends, they can be used in every kind of blends in high proportion.

The filling capacity and combustibility rate of these tobaccos are moderate, however they have a very high hygroscopicity. Their nicotine content is approx. 1 %.

As Bursa tobaccos have lately been in great demand on world markets, the cultivation areas have been extended and production increases from year to year.

Snce the region in which these tobaccos are produced is an uneven land and the area covered is quite vast, the soil shows some what

different characteristics from one place to another. Brown coloured forest soils are predominating, consisting of olive coloured, fine grained, stony or schistous and calcareous elements. The top soil is fine, grayish brown in colour, granular, of a loamy-clay and loamy character. The soil has a neuter-alkaline reaction and is as deep as 8-15 cms.

The average temperature during the growing stage is 21.5°C, total rainfall 111.0 mm. and average relative humidity 60 %.

Farmers stack their tobaccos in the Rumeli method, each bale weighing 15-30 kgs. After processing, commercial bales of 15-20-25-30 kgs. are produced in the same method.

Depending on demand these tobaccos can also be baled, after processing, in small tongas, each weighing 20-25 kgs.

Düzce

These tobaccos are produced at the Düzce, Üsküb̈ü, Gündoğdu and Çilmi cultivation areas of the Marmara region.

The major part of the lands producing tobacco are on the terraced slopes limited by the Düzce plateu, especially in the East, North and North West.

Düzce tobaccos have a medium, partly small size leaf, which is broad and moderately winged. Their texture is very thin, elastic and resistant to stress. The midrib and main veins are so fine that they are hardly visible. The leaves have a wavy surface and laced edges. Their bright colour is from light yellow to light red.

These tobaccos have a mild and sweet taste and a pleasant aroma. They add sweetness to the blends and improve their combustibilty. They also ameliorate the taste and colour of the blends.

These tobaccos can be used in all blends as an improving agent due to their physical qualities and taste properties and are suitable for high quality blends. Their high combustibility and filling capacity are also other assets of theirs.

Some of the tobaccos raised at Üsküb̈ü, which have dark brown dapples on their leaves. These are the distinctive aromatic types of this variety.

The Düzce variety tobaccos are classified among the varieties containing the minimum persentage of nicotine, their average being 0.60%.

The principal characteristics of the soil where these tobaccos are raised are as follows: olive colour, fine sandy, stony or schistous cal careous in nature with a slight alkaline reaction. The top soil is fine, grayish brown or brown in colour, consisting of clay-loams and loams, granular, friable character having a neutral-alkaline reaction. The soil is as deep as 8-15 cms.

The average temperature during the growing stage is 19.9°C, total rainfall 181.4 mm. and average relative humidity is 68 %.

Farmers stack their tobaccos in the İskenderiye method, the bales weighing 30 kgs. After processing, the tobaccos are re-stacked in commercial bales, also in İskenderiye method and 30 kgs. in weight.

Upon special request by the buyers, these tobaccos can be baled in small tongas weighing 20-25 kgs.

DÜZCE 1 : 1

İzmit

The tobaccos of this variety are grown in the districts of İzmit, Pamukova and parts of Geyve, all of which are located in the Marmara region.

These tobaccos have small, partly medium size leaves which are broad and have narrow wings. Their texture is thin and resistant to stress. They have fine veins and a bright colour from light red to red. They have a sweet and satisfying taste and a good filling capacity. They add fullness and a sweet taste to the blends in which they are used. As this variety has no unfavourable effect on the blends, they can be used easily as fillers.

İzmit tobaccos, which were of very different nature, have now been narrowed down to a single variety by continuous studies on selection. Although the leaves usually look like those of the Bafra, "Başı Bağlı" tobaccos, they are bigger in size and more rounded in shape. Their red leaves are sweeter to the taste than the others. The overall impression, however, indicates a very sweet taste.

In the Geyve district, another type of these tobaccos are grown, having a more distinctive ovate shape, but smaller size leaves which are highly aromatic.

The main constituents of the soil in this area are generally calcerous and alluvial, ranging from sandy to clay in nature. The top soil has a depth of 20-30 cm. and is generally loamy. The soil is grayish brown to reddish brown in colour, with granular and friable properties.

The average temperature during the growing stage is 21.8°C, total rainfall 290.8 mm. and average relative humidity 68 %.

Farmers stack their tobaccos in the Rumeli method, each bale weighing 15 kgs. minimum to 30 kgs. maximum.

After processing the tobaccos are again commercially baled in the Rumeli method depending on the size of the leaves, each bale being 15-20-25 and 30 kgs in weight. Upon special request, small tongas of 20-25 kgs can also be made.

İZMİT 1 : 1

Hendek

This variety is raised at Hendek and its surrounding which lie north of the Düzce district, being part of the Marmara region.

The leaves of this variety are ovate in shape and narrow winged. They are easily distinguished therefore from the leaves of other varities. Hendek tobacco has medium and sometime big size leaves which are moderately thick in texture. Their colour is yellow, light red and rarely red.

The taste of Hendek tobaccos is sweet an strong. They add strength to the blends, increase their cutting property and improve their colour. Having a moderately strong taste, this tobacco is especially suitable for sweet and strong blends. They have an excellent combustibility and their filling capacity is satisfactory.

Although the climatic conditions of the area where this tobacco is grown is not so different than those of the neighbouring districts, the Hendek tobacco leaves are quite different in shape and other characteristics than those which are raised in the vicinity.

Hendek tobaccos are obtained from the Trabzon variety. This is one of the rare varieties produced by irrigation. Apart from this variety also a familiar type of the Artvin variety is being produced in this area, and very good results have been obtained with this type of tobacco.

Since the farmers of this area are not interested in producing other crops, they usually concentrate all of their activities onto tobacco. Hendek

tobacco is therefore produced under great care and attention of the farmers.

The leaves of this tobacco are especially used in hand rolled cigarette blends, due to their suitable size and colour.

Hendek tobaccos are classified as strong tasting tobaccos and their nicotine content is between 1-1,5 %.

The soil of the Hendek area is rough (broken land), uneven and covered with brown forest soil. The top soil is fine, grayish brown or brown, loamy, granular and has a neutral-alkaline reaction. The top soil is approx. 8 - 15 cm. in depth.

The average temperature during the growing stage in this area is 21.8°C, total rainfall 219.66 mm. and average relative humidity 68%.

Farmers stack their tobaccos in the İskenderiye method. Each of their bales weigh 30 kgs. After processing, commercial baling is undertaken again in the İskenderiye method and the bales are of the same weight.

HENDEK 3 : 4

Balıkesir

The principal tobacco producing areas in the southern Marmara region are in the districts of Agonya, Balıkesir, Gönen, Yenice, Biga and Susurluk.

The sessile (kabakulak) leaves of this variety are of medium to partly big size, and broad. Their texture is thin, elastic and resistant to stress. They have a bright colour, from yellow to light red. The midrib and veins are undistinguishably fine.

Their taste is sweet and strong. They add strength to the blends and increase their cutting property. Their filling capacity and combustibility is very good.

Tobacco raised in the Gönen district is another type of this variety. This tobacco distinguishes itself from the other types by its smaller size leaves, broad at the upper half of the leaf and light red to red in colour.

Tobacco raised in the Agonya district has a very fine texture and a peculiar aroma of its own. Since these tobaccos appeal to everybody's taste and have a high filling capacity, they are very much in demand. They can be used freely in every blends. The tobaccos of Balıkesir are actually known on foreign markets as Gönen and Agonya tobaccos. They have a slightly excessive nicotine content, the average rate being in the region of 1.5 %.

The tobaccos are produced on quite (broken) uneven lands, The top soil can be classified as brown forest soil - being greyish brown

or brown in colour, loamy, granular, of neuter-alkaline reaction and approx. 8 - 15 cm in depth.

The average temperature in this area during the growing stage is 22.9°C, total rainfall 633 mm. and average relative humidity 60%.

Farmers stack their tobaccos in the Rumeli method, the bales weighing 15-30 kgs. After processing, the commercial bales (also Rumeli method) are 15-20-25 and 30 kgs. in weight.

BALIKESİR 5 : 4

Edirne

This tobacco is produced in the Thrace region which is the European part of Turkey. The main tobacco producing areas in this region are centered around the districts of Kırklareli, Edirne, Uzunköprü, Şarköy, Babaeski, Lüleburgaz, Tekirdağ and Çorlu.

This tobacco has medium size, broad and sessile (kabakulak) leaves. Their texture is usually of moderate thickness and elastic. They are light red, red and dark red in colour.

Their taste is strong and slightly sweet, giving strength to the cigarettes and improving the -cutting property of the blends. They are suitable for hand rolled cigarette blends. Their combustibility and filling capacity are good and they have a spicy aroma of their own. The Edirne variety is an improved and selected type of kabakulak tobacco. While they resemble in outlook to the Balıkesir tobaccos, they have many distinct differences in several of their properties.

These tobaccos are grown in the rolling hills of the Thrace region. during quite dry and hot summer seasons following cold winters. Due to these climatic conditions, Edirne tobaccos are close textured and resistant to stress.

The Edirne variety can be classified as one of the strongest tobaccos regarding taste, followed immediately by the Trabzon variety. Their nicotine content is approx. 1.5 - 2 %.

The main constituents of the soil in this area are olive coloured, loamy stones and siliceous stones or a combination of gravel and sand.

Top soil is brown, grayish brown or yellow - brown in colcur, fine sandy loams and loams, friable, having a neuter or slightly alkaline reaction and being as deep as 16-25 cm.

Average temperature during the growing stage is 21.7°C, total rainfall 104.8 mm. and average relative humidity 65 %.

Farmers stack their tobaccos in the Rumeli method in 15-30 kgs. bales. After processing, commercial baling is undertaken again in the Rumeli method and this time each of the bales weigh either 15, 20 or 30 kgs.

EDİRNE 1 : 1

Bitlis

These tobaccos are grown in the Bitlis, Mutk and Muş districts of Eastern Anatolia, lying not very far from the Lake Van and in the Şemdinli district, being further South. The tobacco producing areas are limited in this region due to the predominance of mountains and broken lands.

The leaves of the Bitlis tobacco are medium size and broad in shape and have broad wings. Their colour is bright from light yellow to yellow. Their texture is of a moderate thickness and elastic.

They have a fairly satisfying and very sweet taste. The rate of their sugar content is very high, sometimes over 25 %. They have a special aroma of their own. Their taste is distinctly different from all other Turkish tobacco varieties. They can be used in cigarette blends as well as in pipe tobacco blends. These tobaccos add a sweet and aromatic taste to the blends and also produce the uniformity of colour.

Their filling capacity and combustibility is moderate. This is one of the rare tobacco varieties which is pleasent to smoke even when unblended.

The production areas of this variety are generally rough, uneven surfaces, mountainous with brown forest soils. The main characteristics of the soil are olive colour, fine grained sandy, enterspersed with stones, schistuous and calcareous. The top soil is also fine, grayish brown or brown in colour, loamy-clay and loam, granular, neutral alkaline in reaction and as deep as 8-15 cms.

Average temperature during the growing stage is 20.1°C, total rainfall 36.9 mm. and average relative humidity 46 %.

The farmers stack their tobaccos in bales weighing 30 kgs., in the İskenderiye method. After processing, the commercial bales are done in the same method and also weigh 30 kgs.

ŞEMDİNLİ

The tabocco raised in the surroundings of the Şemdinli district, lying further south in the same region, are of a higher quality as regards their taste and aroma. The tobaccos have a medium size, sessile leaf (kaba-kulak) broad in the upper half and usually of a rounded shape. Their texture and veins are slightly thinner. Their aroma is pleasant and distinct. They provide a satisfying taste even when unblended. Their nicotine content varies between 1.5 - 2 %.

BİTLİS 1 : 1

Adıyaman

This is a variety which is being produced in the districts of Adıyaman, Pertek, Malatya, Akçadağ, Siverek, Kahta and Hozat of the Eastern region.

The sessile (kabakulak) leaves of this tobacco are medium and sometimes large and wide at the upper half. They have a moderately thick texture and are yellow, light red and red in colour. The midribs of the leaves are rather prominent compared with other varieties, veins are of a moderate thickness.

Their taste is rather strong, sweet — and strong, or satisfying. They resemble the Virginia type tobaccos regarding taste and aroma characteristics. They add strength, sweetness and aroma to the blends, and can be well used in pipe tobacco blends. These tobaccos have a moderate filling capacity and combustibility.

Their nicotine content is approx. 2 %. They are very rich in sugar and can be classified among those tobaccos with the least protein content.

The types of this variety produced at and around the Malatya and Akçadağ districts are somehow different in their characteristics and are ox-tongue shaped. These tobaccos have slightly lower qualities. The Bulam and Celikan villages produce the best tobaccos.

The land of this region is predominantly rough and eneven. The top soil is grayish brown or brown in colour, loamy, granular, friable and strongly calcareous. It is as deep as 8-15 cm.

The average temperature during the growing stage is 24.6° C, total rainfall 26 mm. and average relative humidity 33%.

Farmers stack their tobacco in approx. 30 kgs. weighing bales made in the Iskenderiye method. Commercial baling, after processing, is done in the same method and the bales are of the same weight.

ADIYAMAN 3 : 4

Yayladağ

These tobaccos are grown in the South Eastern part of Anatolia in the districts of Yayladağ, Antakya and their vicinities. The leaves of this variety are medium-size, broad winged and are also broad at the upper half. These leaves keep their gum well after they have been completely dried. Their texture is moderately thick. They are elastic and very resistant to stress. They are either yellow, light red or red in colour.

They have a satisfying and sweet taste and a strong spicy aroma, special of their own. These tobaccos are very suitable for cigarette blends as well as pipe tobacco blends. They add a satisfying and sweet taste to the blends, improving their aroma and cutting property. Due to the above mentioned qualities these tobaccos are among the most suitable varieties for pipe tobacco blends. They can be incorporated into these blends in very high proportions.

The best type of this variety is raised in the mountainous areas surrounding the district of Yayladağ. When unblended they have also a pleasant and satisfying taste. Their average nicotine content is 1.5%.

The soil of this area is generally of a hydromorphic and alluvial nature. The top soil has a brownish gray or pale olive colour, is of clay and calcareous, friable and as deep as 20-30 cms.

Average temperature during growing stage is 25.4° C, total rainfall 98.5 mm and average relative humidity 68%.

Growers bale their tobaccos in the Iskenderiye method, in 30 kgs bales. Commercial bales are made in the same method and are of the same weight.

İSKENDERUN

In this district, located in the İskenderun production area on the Mediterranean coast, an entirely different variety of tobaccos is produced. The leaves of his tobacco are of medium size, heart shaped and with narrow wings. They have a rather thick texture and are red or dark red in colour. Their taste is satisfying and sweet and they are suitable for medium quality blends. These tobaccos are slightly stronger in taste than those of the Yayladağ variety. Their nicotine content is 2 %.

YAYLADAĞ 1 : 1

Pazar

(Cigar tobacco)

Cigar type tobaccos are grown in the Eastern Black Sea region in and around the Pazar district on the uneven slopes of the North Anatolian mountains, stretching towards the sea coast.

Although this variety was originally bred from Wisconsin tobacco seeds, due to the ecologic conditions of the region they have undergone some changes. This tobacco has to be topped.

Growing in a climate, where heavy rainfalls are predominant and the relative humidity is high, the Pazar cigar tobaccos have a big size leaf, wide wings, slightly broad and rather long. They have an extremely thin, and elastic texture and are very resistant to stress. They feel silky to the touch. While their midribs are fairly thick, the veins are practically invisible.

The spaces between the main veins are wide. The leaves are mostly from light to dark brown in colour. Some of the leaves are of a greenish brown colour which is even.

The taste of this tobacco is satisfying and has entirely the character and aroma of cigar tobaccos. They are used as binders and wrappers as well as fillers for cigars. Due to their highly elastic texture and the wide space between the main veins, these tobaccos are very suitable as wrappers for cigars. Their ashes are white and amassing. Their nicotine content is between 1 - 1.5%.

Cigar tobaccos grow on uneven, red coloured, podzolic soils. The soil is mainly composed of various constituents, derived from sandstones,

volcanic and sedimentary rocks. The top soil is grayish brown in colour, sandy loams of an acid character and quite shallow.

Average temperature during the growing stage is 21.1° C, total rainfall 783.5 mm. and average relative humidity 81%.

The growers stack their tobaccos in the İskenderiye method, the bales weighing 10-15 kgs. After processing, the tobaccos are commercially baled in the İskenderiye method, the bales weighing 20 kgs.

PAZAR 1 : 2

Other Varieties

TOMBAC

This variety is grown in the tobacco producing areas of the Arsuz district in the county of İskenderun, at Meydan in Samandağ as well as in the Hadım district, in the Konya county. These tobaccos are smoked with water pipes.

The leaves of this variety are large, some of them medium size, with winged petioles, rounded in shape and broad in their lower halves. Their colour varies between light and dark shades of red with dark red dapples on the surface of their leaves. The texture of the leaves is gummy and thick, the midribs are prominent. They have a satisfying and sweet taste and a pleasant aroma.

After the leaves are cut into rather broad shreds, soaked with water and squeezed by hand, they are placed on top of the water pipe. A piece of glowing charcoal is put over it and the water pipe is ready to be enjoyed.

These tobaccos are mostly used in Iran, the Arab Peninsula, India, Turkey and in small quantities in Greece.

MARDIN GURS

These tobaccos which are grown in and around the Mardin district have a sessile leaf of medium size, ox-tongue in shape. Their texture is rather thick and their colour is from light yellow to red. They have a fairly strong and aromatic taste. Although they have similar effects on the blends as the Adıyaman tobaccos, they cannot be substituted for the latter. They are mostly used in cigarette and cigar blends.

SİLVAN

These tobaccos are grown in the districts of Silvan, Bismil and Beşiri, which are located in the Diyarbakır area. They are mostly produced in sandy soils along the sides of brooks, have usually medium however sometimes large leaves which are broad with broad wings. They are yellow to light red in colour. Their texture and veins are fairly thick.

Their taste is fairly strong and sweet, giving fullness to the blends.

BAHÇE

Growing in the Bahçe production district of Adana, these tobaccos have sessile leaves of medium size and are ox-tongue in shape. They have usually a red colour which is sometimes only light red. Their taste is strong indicating medium quality however they have no distinctive arcma of their own.

HASANKEYF

Belonging to the genus of N. Rustica, these tobaccos are grown in several villages in the Gaziantep district. They are said to be of the same variety as the Mahorka tobaccos. These tobaccos grow in those places where the summers are dry, the relative humidity being very low and the deep soils having a high content of nitrogen. The tobaccos are harvested with their stalks. Their colour is greenish, dark wallnut to mahogany. Their leaves are large and their texture is very thick.

They have a strong taste and are mostly used in the manufacture of chewing or snuff tobaccos. These tobaccos have the highest nicotine content, among all tobaccos grown in Turkey, i. e. 3 - 6 %.

BUCAK

Growing in the villages of Bucak and actually in Bucak itself, and produced from Virginia seed, these tobaccos have large, partly medium size leave which are slightly broad and winged. Their colour is yellow, light red to red and their texture is moderately thick.

They have a satisfying taste and are used in medium quality blends.

TOMBAC 1 : 2

Production

With the exception of some restrictions the production of tobacco in Turkey is regarded to be free in accordance with existing legislations. Any citizen who has attained the majority age can grow tobacco, provided he complies with the legally stipulated formalities.

THE FREE AND PROHIBITED AREAS OF TOBACCO PRODUCTION

Tobacco producing areas are limited in Turkey to some districts only for the protection of high quality crops. A list of these ditricts, counties and localities where the production of tobacco is completely or partly prohibited is annexed to the relevant engrossment.

All prohibited districts which are lying in the production belt but are unsuitable for tabacco are pointed cut. Most of these areas are river beds, lying in the free cultivation belt, lands which are under water in winters, marshlands and water logged lands where tobacco cultivation is strictly forbidden. The areas where tombac and cigar tobaccos should be produced are indicated and also limited by the authorities concerned.

If tobacco is required to be produced within the prohibited area, i.e. in some of the suitable locations prospective growers have to comply with the following formalities prior to starting production.

A farmer will first have to aply for a permit with the State Monopoly Administration. The application is jcintly considered by the Adminis-

tration and the Ministry of Agriculture and if a favourable decision has been reached, the applicants are free to start with probation planting. The trial areas are chosen and the probation period lasts for three successive years. If the results obtained during this probation period are favourable and the tobacco produced is in demand on markets during the ensuing three years, a permit is issued i.e. at the end of the sixth year.

CONTROL OF THE TOBACCO PRODUCTION

The State Monopolies' Administration is charged with the responsibility of controlling the production of tobacco, from the seed bed to the marketing of the final product. This ensures the protection of pure tobacco types, the improvement of Turkish tobacco qualities, keeping the quantity of the corp as much as possible on a balanced level with market demands and the evaluation of the labour force. All these stages of control are carried out in an exact manner.

It has recently been considered that license applications should properly be instituted and action in this direction has started in accordance with developments and in line with the set tobacco production targets.

The farmers who grow seedlings have to inform the local authorities as to the whereabouts of their seedbeds and the seeds used. The authorities in turn have to pass this information on to the State Monoply Adminisstration.

15 days after transplanting, the farmer has to submit a written statement to the local authorities informing them about the location of his field ,its boundaries, its dimension and the place where curing will take place. These statements are then handed aver to the State Monopoly Administration who in turn sets up and distributes a tobacco cultivation control card to each farmer.

Every year, while the tobacco is still in the field, production estimates on yields are made and written against the farmer's control card as his liability. This process is carried out by a body of three persons,

consisting of an official of the Monopoly and two other authorized persons from the locality in operation, whose visit to each region is previously advertised by the State Monopoly Administration.

With the exception of some unusual situations which are laid down by law the farmer is expected to submit after deduction of normal losses the whole quantitiy of his crop to the Government warehouses as indicated on his control card. Growers who do not store their total crop in Government warehouses, but sell it privately are penalized. Those who have been twice penalized for the same action are prohibited from growing tobacco during two successive years.

AGRICULTURAL CREDIT IN TOBACCO PRODUCTION

The tobacco growers are given a «current credit» by the Ziraat Bank (Agricultural Bank) and by the «Agricultural and Credit Cooperatives», a subsidiary of the Bank. The purpose of this credit is to cover some of the growers' expenses incurred during the tobacco growing stage. Generally this agricultural credit is given to the growers in three consecutive steps: firstly, prior to the first cultivation, then prior to priming and lastly prior to marketing.

GENERAL PRODUCTION OF TOBACCO AND ITS DISTRIBUTION TO VARIOUS REGIONS

Table IV shows the general production of tobacco in Turkey during the last 20 years. It can also be seen from that table that although tobacco yields have doubled since 1945, the amount of tobacco per grower has not increased, on the contrary slightly decreased. This indicates that tobacco production keeps the distinctive characteristics of a «family concern».

In some of the regions, under suitable climatic and soil conditions small quantities of tombac, indigenous Virginia, cigar and Hasankeyf type tobaccos are produced.

The distribution of the tobacco crop are shown in table V according to the various regions.

TABLE IV

Tobacco production in Turkey

Years	Number of Villages	Number of Growers	Cultivated area Hectar	Production Ton	Yield per hectar Kg.	Yield per grower kg
1945	4597	182501	98049	69599	710	381
1946	5533	220266	123248	97952	795	445
1947	5813	244474	132480	101928	769	417
1948	5675	201120	106099	83079	783	413
1949	5427	227826	127420	100085	785	439
1950	5285	230970	128343	93328	727	404
1951	5020	223501	121361	88651	722	392
1952	4938	222062	130047	91958	707	414
1953	5078	245731	159026	117795	740	479
1954	4815	239388	156072	102242	655	427
1955	5173	259254	172727	120143	695	695
1956	5408	273991	175667	116570	663	425
1957	4937	258456	169980	123388	725	477
1958	4951	252843	156966	115326	735	456
1959	5718	282278	176792	129383	723	458
1960	5796	298499	187897	139343	741	466
1961	5082	239265	140625	101407	721	424
1962	5667	281673	149346	89793	601	319
1963	7124	391683	235670	132183	561	336
1964	7751	454641	272059	175178	644	385

TABLE V

The tobacco production by regions

Years	Aegean		Black-Sea		Marmara		Eastern		Others		Total
	Production Ton	%	Production Ton	%	Production Ton	%	Production Ton	%	Production Ton	%	Production Ton
1945	30894	44.39	20271	29.13	15541	22.23	2414	3.47	479	0.68	69599
1946	52517	53.62	24685	25.20	17425	17.79	2849	2.10	475	0.48	97951
1947	44989	44.14	24041	23.59	29306	28.75	2924	2.87	667	0.65	101927
1948	45721	55.03	21159	25.47	12700	15.29	3105	3.74	935	0.47	83080
1949	51410	51.73	25408	25.39	19590	19.57	3179	3.17	499	0.50	100086
1950	55492	59.46	18962	20.32	14494	15.53	3720	3.99	659	0.70	93327
1951	42528	47.97	27810	31.37	14654	16.55	3017	3.41	641	0.72	88650
1952	47908	52.10	25029	27.22	15018	16.33	3262	3.55	741	0.80	91958
1953	68904	58.49	28280	24.01	16533	14.03	3035	2.58	1043	0.89	117795
1954	57437	56.18	25501	24.94	14871	14.55	3213	3.14	1220	1.19	102242
1955	70922	59.03	27521	22.91	18320	15.25	2612	2.17	769	0.64	120144
1956	72543	62.23	24898	21.36	15992	13.72	2699	2.31	438	0.38	116570
1957	78115	63.31	24282	19.68	17976	14.57	2726	2.21	289	0.23	123388
1958	57456	49.82	32891	28.52	22749	19.73	2047	1.77	183	0.16	115326
1959	73221	56.59	31001	23.96	21734	16.80	3177	2.45	253	0.20	129382
1960	85999	61.72	27931	20.04	22223	15.95	2820	2.02	369	0.27	139342
1961	63959	63.07	23304	22.98	10480	10.34	3049	3.00	615	0.61	101407
1962	49875	55.54	22603	25.17	12284	13.68	4306	4.80	725	0.81	89793
1963	72588	54.91	36320	27.48	21015	15.90	1969	1.49	290	0.22	132182
1964	11606	66.68	31947	18.24	19877	11.35	5845	3.33	701	0.40	175176

Marketing

The importance of tobacco which constitutes in value 20-25% of the total exports of Turkey necessitates a regulated domestic marketing.

Leaf tobacco trade is free according to the Tobacco and Tobacco Monopoly Act, however the buying of leaf tobacco, its transport within the country and its storage are subject to supervision by the State Monopoly Administration.

The buyers have to be registered with the Chamber of Commerce and prior to the purchasing operation have to complete another application with the State Monopoly Administration. The buying and selling of tobacco in form of garlands an bundles without being stacked in bales is legally prohibited. In other words «à livrer» sales cannot be effected as is customary with other agricultural products. The method of buying and selling of tobacco is determined by the same legal act. Transactions between growers and buyers are effected by means of contracts which are prepared and issued jointly by the Ministry of Commerce and the Ministry of Customs and Monopolies. Special conditions can be inserted in these contracts provided they are not contrary to the legally stipulated provisions. All disputes arising from he execution of the contract signed between the tobacco grower and buyer are submitted to arbitration.

PREPARATION OF THE MARKET

Tobacco marketing, of great interest to a large number of growers, buyers, cigarette manufacturers, labourers and consumers, commences after certain preparations which are mentioned hereafter.

Market preparations commence while the tobacco plant is still in seed beds and afterwards in the fields. The interest in tobacco shown by the State Monopolies, foreign and local buyers, starts with the production and increases continually as the tobacco goes through the various stages.

The first information on the crop is obtained by organized field trips taken while the plant ist still maturing. These visits are for the purpose of estimating the expected yields, the trends during the course of the growing stage and the quality of the crop.

After an interval a second trip is undertaken by buyers to check the condition of the leaves during the curing and baling stages. This is known as a "study trip" during which further data concerning the crop are obtained and added to the general information gained on field trips.

During these inspection trips the buyers study the conditions of each production area so as to determine their purchasing scheme. They check the general quality of the tobaccos and determine the cost price in the production areas. These trips are also referred to as "visual inspection" trips.

Trips for advance payment

In order to obtain a priority on the tobaccos they intend to buy in accordance with their purchasing scheme, the buyers may remit an advance payment, or as it is called "earnest money", to the tobacco growers selected during the study trips. This payment does not imply a selling obligation but gives the buyer a priority during the course of the market when the same prices and terms are proposed. This sum is paid to the growers against a written advance agreement or receipt between the grower and the buyer; failing this, the transaction is not considered valid. This agreement is registered with the Monopolies.

Quality determination trips

These trips are most important as their objective is the evaluation of the crop. This applies especially to the production areas where the to-

bacco is purchased in the villages itself, according to the grades which were determined during these trips.

This is the case for instance in the Aegean region. In all production areas buyers visit villages and inspect the tobaccos bale by bale and appraise the crop quality by grades. These trips have to be completed on or before the opening day of the market.

GRADING

The grading of the tobaccos is generally made prior to the commencement of the market. This procedure is effected during the quality determination trips, only there where it is customary to market the tobacco production in the villages themselves. In places where the warehouse purchase system is practiced, the crop is graded in the official warehouses.

According to the system adopted by the State Monopolies, the tobaccos of the Aegean and East Anaotlia regions are evaluated on a three grade basis, whereas the tobaccos of the Marmara and Black Sea regions are evaluated on a six grade basis. In the Aegean region the quantity of the various grades contained in each bale is added separately together so that a total weight for each grade can be obtained. The total weight of I. and II. grades constitute the "mahsul", upper grades, of the crop and the remaining III. grade tobaccos constitute the "kapa", lower grade. Furthermore the general characteristics and any possible defficiencies of the crop are also recorded. The ratio of higher grades of the total quantity is called "rendement".

The evaluation procedure of the buyers is rather similar, but carried out in a more practical way. The buyers classify each bale, then add the weight of the various graded bales together. The quality of the lot is then determined by dividing the figure obtained with the number of bales.

In the Eastern region of Anatolia, where the tobaccos are classified on a 3 grade basis, evaluation is made by adding together the weights of all three grades.

In the Marmara and Black Sea regions the State Monopolies classify the tobaccos into six grades. The I, II, III, and IV grades constitute the upper qualities called "bıçak", and the V and VI grades constitute the lower quality of the crop called "kapa" or "görmez". The number of kilos per grades are then added together. The methods of grading of other buyers in this region are different from each other. Some of the buyers have adopted the Aegean method, according to which the high grade percentage of each bale is determined, then the sum total of these percentages is divided by the number of bales and the grade of the whole lot is then obtained.

Some other buyers prefer a range of grades starting from I (best) to VII or VIII (lowest) grades. Certain foreign buyers prefer tobaccos of a definite region having small leaves and are grown on slopes, whereas others would rather choose those of the same variety having larger leaves and are partly of medium quality only.

On the other hand, some buyers look for adequate colour in the same variety, some look for dark colours and still others order light coloured tobaccos. Naturally tobacco experts who operate on behalf of these buyers use diferent systems of grading so as to meet the requirement of their principals .

In all regions, tobaccos are roughly sorted by the grower himself while stacked in bales. The following are the particulars on which classification is based:

— location of the leaves on the stalk

— condition of the land in which the tobacco is produced

— thinness of the texture of the leaves, elasticity, wholesomeness, colour and brightness

— degree of maturity at the time of priming, judging of adequate curing conditions

— caharacteristics of the variety

— deseases or other defficiencies of the leaves.

TYPES OF MARKETING AND SALES PROCEDURE

The date of commencement of the market is fixed by the Government and announced by the Ministry of Customs and Monopolies.

According to the particularities of the region, the first growers' market generally starts during the first week of January in the Aegean region, in the middle of January/beginning of February in he East Anatolia region, in the middle of February in the Black Sea region for "dizi" and at the beginning of April in the Marmara and Black Sea regions for "demet" or bundles.

Tobacco purchasing is made in two ways: warehouse and village purchases. Though there is no marked difference between the two, they differ from the point of view of procedure and rapidity, but not from the evaluation system.

Warehouse purchase: This is a direct method of purchase, with a quick turnover. If the personnel and facilities in the warehouse are adequate, the grower may convert his crop into liquid assets in a short time. As this type of marketing is carried out in important centers, much more interest is shown in the crop. The procedure is as follows: the grower deposits his crop in the warehouses reserved for by the State Monopolies where the tobaccos are weighed following a check by the Monopolies' experts who ascertain that they are baled according to the tobacco law in force. The tobacco bales are also subject to grading surveys by both the Monopolies' and other buyers' experts.

The buyers' experts give a price to the grower according to the grades contained in each bale or to the ratio of the "rendement". The grower who has been informed of the price per kilo and thus the total value of his crop, sells his tobacco to the buyer he chooses. After conclusion of the sales agreement, the tobaccos are taken from the official warehouse to the buyers' warehouse. This procedure is usually applied in the Marmara, East Anatolia and partly in the Black Sea regions.

Village Purchase: This is an indirect method of purchase, consisting of the actual purchase having only then been completed when the tobacco has been delivered.

It is a method which proves to be most advantageous where space and other facilities are limited and when tobacco is in great demand. Though the warehouse method is more convenient, it takes a long time as the prevailing conditions do not favour a quick collection of the tbaccos of the whole district in one place. There are many reasons for the grower to prefer the village purchase: his eagerness to learn the value of his crop, his desire to come to an agreement and to secure supporting funds for himself and finally to know the approximate amount of money he will be realizing. On the other hand as the buyers are compelled to purchase large quantities in a short time to fill their contingents, they are inclined to prefer the village to the warehouse purchase method.

The procedure of the village purchase is as follows: the tobacco bales owned by the growers are inspected by the buyers' experts in the villages for the determination of their grades and ratio of upper grades of the whole lot. The price is fixed by grading each bale according to its standard weight and the sales agreement is concluded. According to this agreement, the amount of money to be paid to the grower is only approximative, and the buyers fill their contingents in a very short time. The tobaccos are stored in warehouses after the buyer obtains the transport licence. Subsequently, after delivery to the warehouse, they are inspected first by the Monopolies' experts as legally required and then weighed. The grading by the buyer, in other words the real value of the crop as well as the sum to be received by the grower, are only then fixed.

This method of procedure is the one usually applied in the Aegean and Marmara and partly in the Black Sea (for "dizi" bales) markets.

LOCAL AND FOREIGN BUYERS

Large capitals are needed for the purchase and sale of tobacco. Besides, the processing of the tobaccos purchased from the grower, their preparation for local consumption and export also require equipment and organization necessitating large sums of capital. In present circumstances about one billion T.L. are paid to the growers in order to purchase their total annual production. With the addition of processing, aging and

other such expenses, this sum increases considerably. The payment of the value of the purchased tobaccos must be effected in a very short time. As the buyer has to process his tobacco before selling it wholesale, the conversion of the merchandise into money takes a certain time in the tobacco trade. This is the reason why the buyer must have large amounts of liquid assets at his disposal and his credit must be good.

The buyers operating in the tobacco markets may be classified in 5 groups;

State buyers: the organization, which buys the tobacco for domestic consumption, is the State Monopolies. Their enterprise effects purchases with its working capital. It also carries out "supporting" purchases on behalf of the State.

Suppliers: small and large scale buyers who sell the purchased tobaccos to foreign companies. Their purchases are mostly made on the basis of orders received. They constitute an important part of the local buyers.

Representatives: they represent foreign companies and operate on their behalf. They are organized as branches of these establishments

Free buyers: they are not bound to any company and therefore operate independently. Some of them have branches abroad. They follow the trends of foreign markets and purchase accordingly. Later on they contact foreign buyers and export their tobaccos to them. Their number is limited.

Small scale buyers: These are generally local buyers who purchase small amounts of definite varieties and sell them to the above mentioned buyers either after processing or before. They operate on a commission basis, process the tobacco at a low cost and sell it with a small profit. They are not regular buyers.

REORGANIZATION OF THE SELLING METHODS

There is a general tendency in marketing for adopting a new selling system satisfying both the grower and buyer and which is more suitable

to prevailing conditions. In order to prevent the fall in prices which would be detrimental to growers, or the increase in prices causing difficulties to exporters, marketing of tobacco through auction floors is under consideration. This system would be based on competition and the minimum prices would be determined by the State experts. Many endeavours have recently been made to adopt this selling system.

Processing and Ageing

The processing and ageing of tobacco leaf constitute, with regard to effects on quality, the two most significant stages following production. The differences between the set objectives and the methods of application of these two correlated operations will be discussed separately.

PROCESSING

The processing of Turkish type tobaccos which are extensively produced in a vast area has continually been developing since the initial introduction of tobacco into Turkey. Some of the processing methods used in the past for the production of Turkish tobaccos have become obsolete as they can no longer be adapted to present economic conditions. Those procedures which were quite complicated and expensive were either simplified in the course of time, completely abandoned or else replaced by more rational methods. During the last 25 years, manual labour gradually gave way to mechanization and every effort is now being made to develop mechanized operations. With the exception of certain varieties which are produced in limited quantities and present certain technical difficulties, it can be said that the processing of tobacco leaf will be completely mechanized in the very near future.

The dried tobacco leaves are stored by growers in bunches or heaps according to the peculiarities of their varieties and districts of production, roughly classified and baled in garlands or bundles before marketing.

The tobacco leaf which is classified by growers in a simplified manner is subject to another more careful classification and baling, after

it has been bought by the buyers. The reasons for this processing which involve further labour and expenses are as follows:

Standardization

The bales bought from the grower vary both in grade and weight, whereas the modern cigarette industry requires a standardized product. On the ather hand, as the tobacco leaves are not fully matured before selling takes place, they cannot be thoroughly classified. The characteristics of the tobacco can vary after fermentation according to their peculiarities and the ageing method applied. In order to obtain homogeneity, it is most important that the tobacco leaves be processed according to a standard procedure. On the other hand, since the quantity produced by each grower is below 500 kgs, it is impossible for the grower to bale each grade separately according to the requirements of the buyers, in view of technical and economic reasons and lack of equipment.

Owing to the above reascns the grower cannot effect proper standardization and this can only be achieved by further processing.

Fermentation

To ferment tobacco under normal conditions, it has to be classified by standard measures, i.e. tobaccos which have a similar chemical composition are stacked into bales of the same shape and weight.

Different Blends

To prepare cigarette blends with different tastes, the tobacco leaves have to be classfied into various grades according to their type and quality.

Buyers Requirements

In the tobacco trade the evaluation of the quality is partly efected on a nominal and partly on a definite basis. It also depends on the trend of the consumers' taste. The blends prepared for the satisfaction of a certain group of smokers can vary in time so as to suit the general

trend. In that case it will be necessary to change the classification method accordingly.

Storage and Transport Facilities

It is imperative that the tobacco is processed in such a way as to secure a uniformity in shape, weight and quality which will facilitate storage, ageing, transportation and inspection.

In spite of the fact that there are certain conditions laid down by the Tobacco Monopoly Act concerning further processing of tobaccos after they have been purchased from the growers, a penalty is not imposed on those who do not wish to comply with these conditions. This Act stipulates that a body of representatives of the Ministries concerned investigate the processing centers with respect to the baling methods used and fix the standards of baling (according to types, regions of production, and varieties or strains of tobacco). This provides a protection of the quality and increases the marketing prospects.

GRANDING

The first and most important stage of processing is the grading of the tobacco leaf according to commercial and industrial evaluation. Separate grading and baling of each type of tobacco facilitates fermentation, storage and ageing as well as evaluation of the leaf.

The various values of the leaves are expressed in grades. These grades are determined by expert evaluation, visual, touch, smell and if required by actual smoking.

The following are the factors which determine grading:

Varieties

Although the basis used to determine the values in tobacco are similar, the factors can differ when various varieties are involved and different products (according to the characteristics of the blends) are to be manufactured. Therefore, it is necessary to consider all the characteristics of the varieties so that the leaves can be sorted according to the requirements.

Hand

Each group of leaf which has the same size, same form, and a similar degree of maturity and which is primed at the same time according to the position on the plant, i.e. picked individually, is called "hand".

The leaves of the same hand are nearly alike from the point of view of physical and chemical properties, but naturally differ a little from one another. The hands are as follows: Sand leaves, bottom leaves, first middle leaves, second middle leaves, third middle leaves, lower top leaves, top leaves.

Size

This is relevant to the surface area of the leaf. The size differs from variety to variety according to the districts in which they are produced. The largest leaves among Turkish tobaccos are first middle leaves and second middle leaves. The leaves are getting smaller towards the top and towards the bottom of the plant. The varieties are approximately classified in three groups according to the size of the leaves: small, medium and large. With the exception of some varieties, which are in small number, Turkish tobaccos are generally of small and partly of medium size leaves. If the leaves are not within the normal standard of their variety, the grading is affected in a negative way.

Colour

The colour of the leaf plays an important role in the evaluation of the tobacco which is closely related to the chemical composition of the leaf. As the taste and colour of each variety is different, no definite standard can be evolved.

Aroma

The distinctive aromas of Turkish tobacco are known the world over and are much in demand. The aroma is the one most essential factor in grading. The tobacco is divided into four groups according to their

aromatic properties: highly aromatic, aromatic, lightly aromatic and sui generis.

The aromatic properties of Turkish tobacco are acclaimed without any addition of artificial flavour. The aromatic properties present in Turkish tobacco can be considered as a criterion of quality.

Texture

The texture of the tobacco leaf from the point of view of its fineness or thickness, resistance or flimsiness and elasticity plays an important role in the grading and evalution.

The texture of the leaf must be thin, resistant and elastic for the quality to be good.

The Wholeness of Leaf

The lamina of the leaf must be in perfect condition (not torn), else it will be included in lower grades.

Defects and Deseases

Defects of the leaf and deseases are considered major factors when grading and evaluating the tobaccos. These two factors alone eliminate all other factors which affect in a detrimental way the quality of tobacco. The tobacco leaf can sometimes lose completely its commercial value because of desease and other defects, and care must be taken to handle them accordingly.

GRADING METHODS

The various grading methods applied by the Monopolies and other buyers (local or foreign) are similar in principle but differ slightly from each other.

Classical Grading (6 Grades)

The tobaccos are divided into two groups: "Bıçak" which represent the higher grades and "Görmez" which constitute the lower grades.

The Bıçak is divided into four and the Görmez into two grades. Some buyers divide the Bıçak into five or six grades and include all the Görmez into one single grade. This system of grading is applied to tobacco of the Black Sea and Marmara regions.

American Grading

This method is applied to tobaccos grown in the Aegean, Black Sea (Trabzon and Artvin varieties excluded) and Marmara regions. The tobacco leaves are classified into four groups known as AG, BG, Kp. and KpKp (Double Kappa).

Calsse Unique Grading

This method which is applied to varieties of the Aegean, Black Sea and Marmara regions, processed according to the American Grading system, is gradually spreading to all tobacco producing areas. KpKp (DKp) excluded, all hands are processed together.

Three Grade Method

This method is applied to tobaccos of Eastern Anatolia.

Baling Methods

Most of the old and complicated baling methods have been abandoned and simpler and standard systems are used today. Turkish tobaccos are actually baled according to the following methods: Rumeli, İskenderiye, Tonga.

Rumeli Method

This baling method was in use by Turkish growers especially at "Kavala" and "İskeçe" at the time when Greece was still within the boundaries of the Ottoman Empire. The Bursa, İzmit, Balıkesir (Agonya, Gönen, Yenice) and Trakya varieties are baled according to the "Rumeli" method.

The sorted leaves are stacked inside the case side by side in two rows, with the tips of the untied bundles placed on top of each other. There is no middle row. Generally, the "Bıçak" bales are stacked with untied bundles and the "Görmez" bales with broad bundles (sıra pastal).

The cases belonging to the Rumeli method have no front nor back panels but a slide-in panel in the middle and stand vertically. The width of the box can be adjusted according to the size of the leaves. Its height is 140 cm, its depth 40 cm. and its adjustable width varies between 15 - 35 cm.

The weight of the bales may be 15, 20, 25, to 30 kgs, according to the size of the leaves.

İskenderiye Method

This method is named Iskenderiye due to the fact that the tobacco leaves baled in this manner were once upon the time exported to Alexandria. This method of baling is however indigenous to Turkey. This system is also known under the name of Anatolian or Samsun method. It is applied to the Trabzon and Taşova tobaccos of the Black Sea region and to the Düzce and Hendek tobaccos of the Marmara region as well as to all other varieties grown in the East.

This method of baling requires the sorted leaves to be stacked into the bale in untied bundles or in form of broad bundles. Provided there is space, middle rows are placed between the side rows. The case used for this method of baling is closed on all four sides but open at the top and bottom. The side panels are removable and can slide 5 cm. outwards or inwards according to the size of the leaves. The case has a wooden palet which can be used as a horizontal support if necessary, has 2 stands for lifting purposes and a hard cover for pressing down the tobacco layers stacked in the box. The bale has six sticks (3 at the bottom and 3 at the top).

The case has a width of 40 cm, a length of 80 cm, and a height of 40 cm. The weight of the bale is 30 kgs.

According to this method, the "bıçak" bales are stacked in the form of untied bundles and the "görmez" bales as broad bundles, each bale containing the same grade of tobacco.

Tonga Method

The Tonga baling method has become widespread during the last 25-30 years and 85 to 90% of processed tobaccos are at present Tonga baled. As this method was previously only applied to Izmir tobaccos, it was also known as the Izmir method.

The method mostly in use today is the tonga-blend method where similar varieties or types are baled together. All of the Aegean tobaccos are baled according to the tonga blend method.

Though this method presents some technical difficulties from the point of view of fermentation and ageing, its great economical advantages cannot be denied. The tonga method can be divided into two groups:

Big Tonga: The classified tobacco leaves are placed in the big tonga case either by hand or by machine and then pressed. This method is used for tobaccos of the Aegean and sometimes East Anatolian regions.

The weight of the bales are 45 or 60 kgs. The dimensions of the 45 kgs. tonga bales are: width 30 cm, length 70 cm, height 70 cm., whereas the ones of the 60 kgs are: width 40 cm, length 70 cm, height 70 cm.

Small Tonga: The classified tobacco leaves are placed in the small tonga case either by hand or machine and then pressed. This method is applied to the Samsun-Maden, Samsun-Canik, Bafra, Sinop and Gümüşhacıköy tobaccos. Other Black Sea varieties and Marmara tobaccos may be baled according to this method.

The weight of the bales is either 20 or 25 kgs. The dimensions of the cases are: width 30 cm, length 60 cm. and height 65 cm.

AGEING

So that the tobaccos bought from the growers may ferment under favourable conditions, improve in quality and maintain their properties for a cansiderable long time, special ageing methods are used according to varieties and environment. Experience has shown that the tobacco leaves cannot reach the desired quality without undergoing adequate fermentation.

The following measures have to be taken for this purpose:

Rearrangement of the bales, pressing, stacking and overturning of the bales as well as airing and rebaling.

Rearragement

The butts of the leaves and bundles in the bales which have altered their original position are being re-ordered against the sides.

Pressing

The bales are pressed so as to make them compact and resistant in order to facilitate the ageing processes and to ensure a favourable environment for the improvement of quality. To this effect, different presses are used according to the shape of the bales. The press used for the "Iskenderiye" type bale is called "cırgana" and the one used for the "Rumeli" type is called "mengene". The mengene and cırgana presses are employed after the tobaccos are processed, baled and subjected to ageing for a certain period of time. The tonga bales however are pressed immediately after processing, in the same operation as the baling. These presses are operated either by hand or by machines.

Stacking

The stacking procedure consists in placing the bales side by side or on top of each other according to the properties of the leaves and the seasonal conditions. In general the bales are stacked in three ways, namely "kılıç", "istif" or "plaka".

When stacking in the from of "kılıç" the leaves are placed on their edges, the horizontally lying tips and butts facing towards the sides. In this case the bales are likely to get more air, excess of moisture and or heat is eliminated and fermentation can take place under favourable conditions.

When stacking in the form of "istif" (flat), the leaves are lying flat in the bales. In this case the leaves become smooth and mature as desired. The height of the bale can be reduced to facilitate packing.

When stacking in the form of "plaka" (on the butts) the midribs of the leaves are in a vertical position. The butts or tips, according to the position of the leaves in the bale, face either upwards or downwards. This form of stacking ensures least possible contact with the air and the leaves maintain their moisture content.

Overturning of Bales

The position and place of the bales are changed in order to increase or decrease the pressure on the tobacco leaves. The frequency of these changes depends on the condition of the leaves.

Airing

This procedure is applied to all bales except tonga bales. It consists in loosening all the strings of the tobaccos in the bale by hand so as to let in air from outside, enabling the leaves to lose any moisture or heat excesses.

Rebailing

The bales are opened and restacked after the leaves are separated. This procedure is applied to defective or over-conditioned bales. During restacking of the bales defective leaves and bundles are left out, and the over-conditioned leaves are aired, eliminating excess of moisture.

In order to determine the right time and duration of the above procedures, it is necessary to keep a close watch on the condition of each

bale, keeping in mind the climatic conditions of the producing district and the location of the warehouse.

FERMANTATION

For the achievement of best results the most important operation of the ageing process is to take the most suitable measures for the fermentation of the tobacco. Insufficient fermentation hinders the maturing of the leaves. Likewise, excessive fermentation causes the leaves to lose some of their fine qualities.

The fermentation of Turkish tobacco takes place under natural conditions and normally in three stages:

The first stage is called pre-fermentation. It takes place while the leaf tobacco is still in the hands of the growers. During this fermentation the tobacco loses its moisture and slight chemical changes occur.

The second Stage is called the second fermentation which takes place while the tobacco is stacked in bales and generally when these bales are in the buyers' warehouses. This is the essential fermentation during which important chemical changes take place and therefore it plays an important role in the ageing of the leaf.

The third stage is called the first fermentation which takes place the year after the first fermentation. This fermentation, which is only slight when compared with the previous one, assists the leaves in their maturing process.

Tobacco bales are stored in single or double "kılıç" position during the first and second fermentation stages and overturned at regular intervals.

Once the leaves undergo fermentation in favourable conditions, they lose their coarseness, bitterness and harshness. Their strength decreases to some extent and the aroma improves. The greenish colours of the leaves disappear and they acquire an even colour.

Turkish tobaccos are classified into three groups with regard to fermentation which may be strong, normal or weak. The tobaccos of the Eastern region, Sinop, Balıkesir and Edirne varieties undergo a strong fermentation; the Samsun variety and the tobaccos grown in the environment of Samsun (expect Sinop), Düzce, İzmit, Bursa, Hendek and Trabzon belong to the category of normal fermentation and the tobaccos of the Aegean region are grouped under the category of weak fermentation.

Manufacture and Consumption

Various types of tobacco products taking into account demand and supply are being manufactured in the six tobacco factories established in the various parts of the country. They produce 39 different types of products, including those for export, and their output is planned according to the demands of consumers. 22 of these products are cigarette brands for domestic use, 5 for export sale, 3 types of cut tobacco, 2 types of pipe tobacco, 2 types of tombac, 4 types of cigars and 1 brand of snuff tobacco. Only 4 cigarette brands are made with filter tips.

The yearly total manufacturing output, expressed in percentage of the various types is as follows:

Cigarettes 86.30%, cut tobacco 13.36%, and others 0.34%. On the other hand 1.5% of all the cigarettes are with filter tips, 86% of cigarettes are rounded in shape and 14% are oval.

Manufacturing and selling of tobacco products throughout Turkey is in charge of the State Monopoly by a special decree called the "Tobacco and Tobacco Monopoly Act". Besides the Monopolies, private enterprises can also be established for the manufacture of tobacco however only for export purposes.

Production

The annual production has reached in recent years approximately a total of 34 million kgs. The total output of the existing factories, their percentage in the total production of cigarettes and other products as well as the number of the various types they produce are shown below:

Name of factory	Number of types produced	Quantity million kgs.	Percentage in total production
İstanbul	34	12.50	35.2
İzmir	7	7.75	22.8
Samsun	7	5.25	15.4
Malatya	9	4.75	14.0
Adana	7	3.65	10.8
Bitlis	3	0.60	1.8
		34.50	100.—

1000 cigarettes being one kg.

CHARACTERISTICS OF THE BLENDS

The majority of Turkish cigarette types and packaged tobaccos can be considered to lie within the three groups of blends classified according to their tastes into "mild", "full" or "strong". The blends within each group can show certain varying tastes. Apart from these there are export blends ranging from mild to satisfying in taste and the blends of filtered, uncased or cased cigarettes which form a special group. There are no types of blends which have very strong taste characteristics.

SPECIAL ASPECTS OF THE MANUFACTURING PROCESSES

The manufacturing process of Turkish tobaccos has some special aspects of its own when compared with other manufacturing systems using predominantly different types of tobacco.

Turkish tobacco generally has small and medium size leaves, is of thin and elastic texture, has fine veins and usually a natural aroma.

Due to this fact it is not required, nor necessary, during the manufacturing process of this tobacco to separate the midribs from the leaf. By eliminating this operation during the manufacturing of tobacco a 25-30% economy in the raw material is achieved.

It is preferable to condition the aromatic Turkish tobaccos throughout the manufacturing stages by processes which work under natural condi-

tions. During the cutting process which is the last step of the first stage in the manufacturing process, Turkish tobacco undergoes no high level moistening unlike other types of tobacco. On the contrary it is advisable to cut the tobaccos while they are in their relatively moist state without having to create any forced conditions. İf the installations are such that they meet the requirements for maintaining this set condition, it will not be necessary to re-condition the tobaccos during he manufacuring process.

It is not required during the manufacturing process to expose the tobacco to high temperatures, neither should the ribs of the leaves be pressed, or added into the blends in a highly moistened condition.

Like any selected tobacco of high quality, Turkish tobacco has to be processed with utmost care.

The ability of Turkish tobacco to lend its special characteristics to the final product in accordance with the required proportion increases in degree with the excellence of the manufacturing method and the rate of attention paid to it.

SPECIAL ASPECTS OF THE TOBACCO PRODUCTS

Cutting

Depending on the type of blends and cigarettes which are to be made, the tobacco leaves are cut (shredded) into 0.65 - 1.00 mm. shreds. For high quality blends, however, the leaves are generally cut into finer shreds.

Dimensions and Weights

The diameters of the cigarettes change between 7, 7.75, 8.00, 8.25 and 8.50 mm and according to the brand their size differs between 68, 74, 80 or 85 mm in length. Cigarettes are manufactured either round or oval in shape. 1000 cigarettes weigh from 700 to 1300 grs. Filter tip cigarettes have of course an increased weight. Four types of cigars are manufactured in Turkey and, depending on the brand, each cigar is between 1.8 - 7 gr. The lengths of the cigars are from 85 to 130 mm, and they are 10 - 17 mm

in diameter. Cut tobaccos are manufactured and sold in 20 and 25 gr units.

Pipe tobaccos are sold in packs of 50 grs, or in boxes weighing 200 grs.

Tar and Nicotine Contents of the Tobacco Smoke

Analytical research carried out on the various popular tobacco products showed that the rate of tar and nicotine passing over into the smoke is considerably less than those of foreign tobacco products. The rates of tar and nicotine contained in the smoke of the most popular cigarette brands is shown in Table VI.

Standards of the Products

The set standards for the maintenance of the taste are shown in Table VII. The manufacturing process in the factories of the Turkish State Monopolies is subject to monthly controls based on these standards.

CONSUMPTION AND EXPORT OF CIGARETTES

In Turkey the consumption of tobacco products is increasing year by year. The average annual rate of increase is approx. 3.5%. Statistical figures concerning the consumption of tobacco products during the last 20 years are given in Table VIII.

Although constituting only a relatively small quantity compared with domestic consumption, the export of cigarettes has also been increasing. Regular exports are made to the U.S., U.K and Sweden and occasionally into the Middle East countries.

DEVELOPMENTS IN THE CIGARETTE INDUSTRY

To meet the yearly increasing demand of consumer products, effective mechanization and modernization of existing cigarette factories have been undertaken. Within this programme of expansion a new cigarette factory has been established at Maltepe, near Istanbul, which is planned to start operations in 1967, when the mechanical installations have been

completed. Meanwhile, the projects of re-construction and modernization of the Adana and Malatya cigarette factories have also been prepared. Once work on these latter two factories has been completed, the Izmir and Samsun cigarette factories will also be modernized accordingly.

The annual production capacity of the Maltepe cigarette factory (on a 2400 hour basis) will be 20 billion cigarettes. When planning this factory consideration was given to the increased demand of consumer products, and the manufacture of higher quality cigarettes which would only be achieved with the aid of modern machinery and equipment. The factory building is completely air conditioned. Manual labour has been decreased to a minimum in each stage of production, and the link between the different parts of the factory have been automated. Due to the perfect conditions prevailing in this factory any tobacco loss will be brought down to a minimum.

A pilot plant will also be established to further existing developments in the tobacco manufacturing and to make tests on the subject matter as well as to undertake research on relevant subjects covering all stages of production. Moreover a laboratory will be set up within the factory to contorl all manufacturing processes.

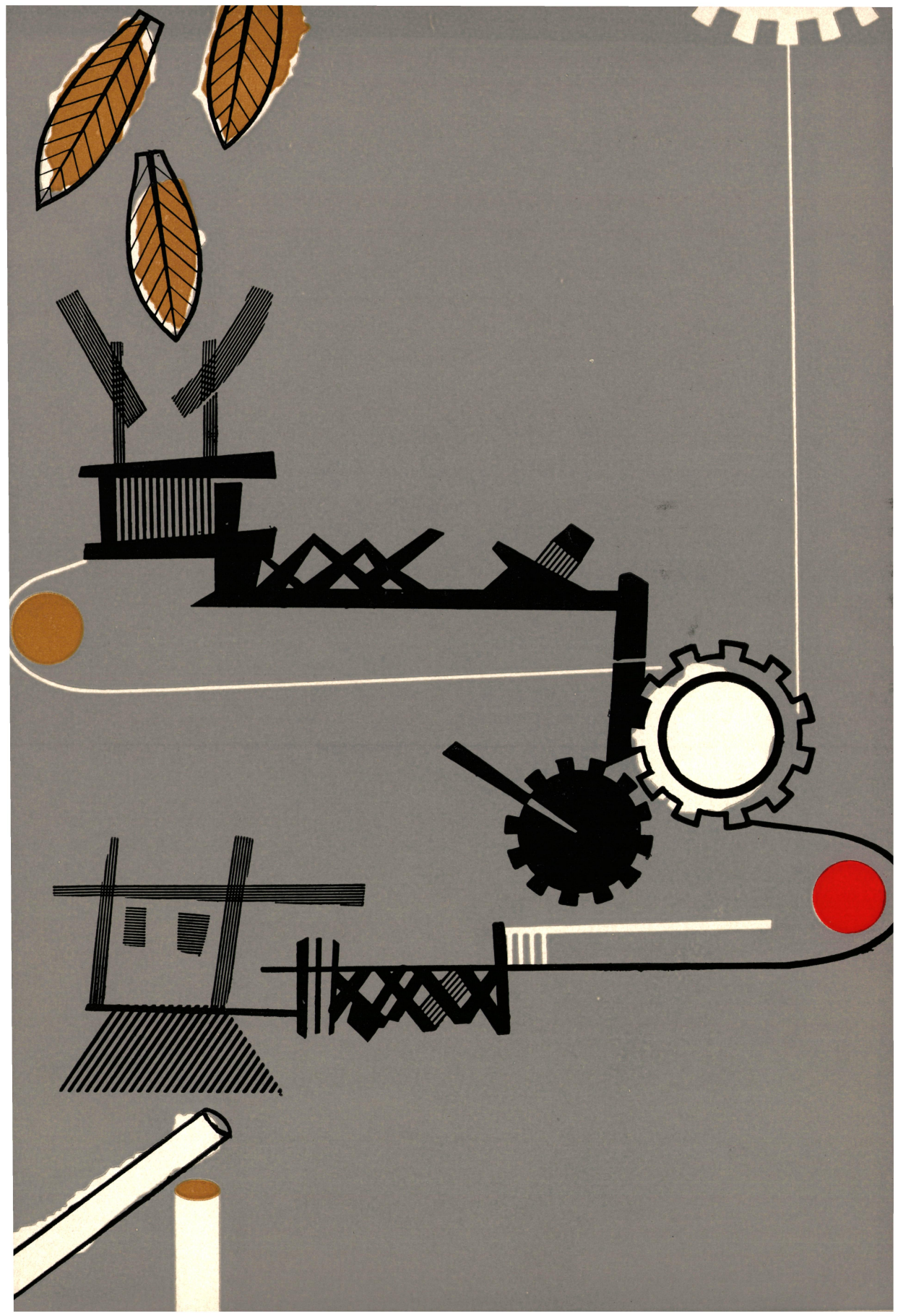


TABLE VI

Tar and Nicotine Contents in the Smoke of one Cigarette

Cigarette	Nicotine Mgr.	Tar Mgr.
Samsun	1.71	24.67
Çamlıca	1.45	23.08
Yeni harman	1.92	27.84
Diplomat	2.32	44.76
Sipahi	1.55	54.13
Boğaziçi	1.14	37.48
Yaka	1.24	26.81
Yenice	1.21	24.01
Bahar	0.98	21.81
Kulup	2.22	31.43
Bafra	2.41	29.21
Gelincik	1.33	19.32
Birinci	1.94	33.53
İkinci	1.57	24.14
Asker	1.69	27.80
Jockey Clup	1.52	33.93
İzmir	1.27	30.63

Characteristics of the act of smoking :

Length of draw	:	1.5 second
Interval between draws	:	30 second
Volume of draws	:	35 Ml.
Cigarette butt	:	20 mm.
Atmosphere N.R.	:	% 60-70

TABLE VII

The Standards of Turkish Tobacco Products

Product	Weight (*) Gr.	Moisture %	Nicotine %
Samsun	1 460—1 540	11.0—12.0	1.50—1.80
Çamlıca	1 465—1 550	11.0—12.5	1.20—1.50
Hisar filtreli	1 465—1 550	11.0—12.5	1.30—1.60
Hisar sade	1 470—1 560	11.0—12.5	1.30—1.60
Yeni harman	1 240—1 320	11.0—12.0	1.60—1.90
Diplomat	1 200—1 280	11.0—12.0	0.80—1.10
Sipahi ocağı	1 200—1 280	11.0—12.0	0.60—0.90
Boğaziçi	1 000—1 050	11.0—12.0	0.70—0.90
Yaka	860— 920	11.0—12.0	1.00—1.20
Yenice	860— 920	11.0—12.0	1.00—1.20
Bahar	720— 750	11.0—12.0	1.00—1.20
Kulüp	970—1 040	11.0—12.0	1.35—1.60
Bafra	950—1 000	11.0—12.0	1.35—1.60
Gelincik	700— 730	11.0—12.0	1.35—1.60
Silâhlı kuvvetler	940—1 000	11.0—12.0	1.10—1.40
27 Mayıs	940—1 000	11.0—12.0	1.35—1.65
Birinci	950—1 010	11.0—12.0	1.35—1.65
İkinci	970—1 010	11.0—12.0	1.10—1.50
Üçüncü	865— 920	11.0—12.0	1.00—1.40
Asker	865— 920	11.0—12.0	1.00—1.40
Doğu	980—1 040	11.0—12.0	1.30—1.70

Continued on page 91

(*) Weights per 1000 cigarettes

Table VII (Continued)

Product	Weight (*) Gr.	Moisture %	Nicotine %
Bafra Tütün	20.0	11.0—12.0	1.35—1.65
Tatlı sert	25.0	11.0—12.0	1.40—1.70
Beşinci Tütün	25.0	11.0—12.0	1.40—1.60
Tömbeki I	25.0	11.5—12.5	2.70—3.00
Tömbeki II	25.0	11.5—12.5	2.90—3.20
Ankara puro	7.0	11.0—12.5	1.20—1.50
İstanbul puro	5.0	11.0—12.5	1.20—1.50
Pazar puro	3.5	11.0—12.5	1.20—1.50
Marmara puro	1.8	11.0—12.0	1.20—1.50
Türk pipo	50.0	13.0—14.0	1.40—1.70
Yayladağ	50.0	13.0—14.0	1.10—1.40
Yayladağ (box)	200.0	13.0—14.0	1.10—1.40
Enfiye	50.0	—	1.80—2.00

(*) Weights per pacage, excluded cigars which weigh by piece.

TABLE VIII

Sales of Tobacco Products

Years	Filter tip Cigarettes kg	Plain cigarettes Kg.	Cut tobacco Kg.	Pipe tobacco Kg.	Cigar pieces	Tombac Kg.	Snuff Kg.
1945	—	9.171.683	1.619.102	3.464	1526000	29678	1713
1946	—	14.672.241	2.708.999	5.776	2205000	54707	2605
1947	—	15.280.525	2.575.298	5.777	2180000	60240	2096
1948	—	15.000.964	2.764.484	5.980	2015000	58322	2008
1949	—	17.713.485	3.068.460	9.071	1493000	67731	2201
1950	—	15.761.762	2.473.274	8.918	1091000	61732	1549
1951	—	17.002.151	2.586.836	12.173	1182000	62507	1621
1952	—	18.673.485	2.817.234	18.353	1428000	64409	1630
1953	—	20.428.333	2.712.184	21.654	1594000	68244	1753
1954	—	22.605.548	2.714.983	18.491	1970000	72213	1852
1955	—	22.460.705	2.745.369	14.039	1874000	82807	1665
1956	—	23.400.544	2.919.376	14.803	2140000	86946	2096
1957	—	25.996.335	3.052.508	15.099	1966000	96215	2603
1958	—	27.932.571	2.022.246	14.629	2176000	112165	2689
1959	23906	26.677.140	2.894.140	13.992	2058000	103839	2500
1960	24230	27.147.718	3.084.097	13.947	1627000	96901	2327
1961	208262	28.111.430	3.560.960	15.599	1607000	102626	1616
1962	335904	29.361.299	3.987.016	16.554	1668000	105015	875
1963	146571	29.260.545	4.270.061	19.604	1255000	94451	439
1964	227627	30.211.067	3.566.842	32.568	1599000	103267	646

Exports

Among Oriental tobaccos grown in other countries, but having similar characteristics, Turkish tobaccos have always been in a leading position both from the point of view of quality in general, quantity produced and exported. Due to their superior quality and improving properties when mixed in various cigarette blends they occupy a significant place in world production and trade. Comparative figures show that among tobacco producing and exporting countries, Turkey takes the seventh place regarding production and second in exports.

Between 1955 and 1964 the yearly world total tobacco production was 3,935,793 metric tons and the average world Oriental tobacco production amounted to 350,239 metric tons, i.e. 8.9% of the world tobacco production. Of this last figure, Turkey alone produced 35.5% of Oriental tobaccos.

During the last decade the yearly average world tobacco exports amounted to 675,342 metric tons. 30.4% of this quantity consisted in Oriental tobaccos. During this period the yearly average tobacco exports by Turkey amounted to 67,608 metric tons, i.e. 10% of the world tobacco exports, and 32.9% of Oriental tobacco exports.

The tobacco trade in Turkey is free within the framework of the requirements stipulated by the "Tobacco and Tobacco Monopoly Act". The selling and purchasing of tobacco, its transportation in the country itself and its export to foreign countries, as well as the establishment of processing and warehouses are subject to control by and under the supervision of the State Monopolies.

Tobacco dealers and companies have to be registered with the Chamber of Commerce and they also have to complete the necessary formalities with the State Monopoly Administration prior to buying and selling tobacco. Furthermore, the State Monopolies Administration also act as tobacco buyer but they only export those tobaccos which were bought on behalf on the State for supporting purposes.

Nonetheless, the State Monopoly Administration and private buyers have the same position inasmuch as tobacco trade is concerned. In conformity with the system in force, trends in the tobacco trade have generally been progressing towards export.

Turkish tobacco is exported mainly to four different groups of countries. These are: dollar area, E.M.A., free exchange or sterling area and bilateral agreements area. Although export of tobacco is free by virtue of the written declaration submitted to the Customs Administration and the use of free exchange money, it is, however, subject to registrations. Furthermore, exports made against payment other than dollars and convertible E.M.A. exchanges, as well as countries of bilateral payment and trade agreements, are subject to special licences.

The competent authority for registration of tobacco exports are the Tobacco Merchants' Association of Ege, Istanbul and Samsun which are all amalgamated and under the responsibility of the Tobacco Merchants' Federation of Turkey. After the approval by the Ministry of Commerce, this registration becomes effective as a licence. The necessary procedures for tobacco exports are indicated in the manual "Regulations for Foreign Trade-Exports" issued by the Ministry of Commerce.

TABLE — IX

Oriental Tobacco Production in Various Countries (in tons)

Year	Turkey	Greece	Bulgaria	Yugoslavia	Total
1951	88.650	62.204	58.060	27.804	236.718
1952	91.958	39.442	40.824	14.835	187.059
1953	117.795	60.984	52.164	29.053	259.996
1954	102.242	67.501	48.081	29.199	247.023
1955	120.144	100.224	65.772	41.500	327.640
1956	116.570	81.143	48.082	30.730	276.525
1957	123.388	72.726	72.576	63.300	331.990
1958	115.326	81.730	76.370	39.200	312.626
1959	129.382	75.250	93.240	45.900	343.772
1960	139.342	63.095	59.752	30.900	293.089
1961	101.407	72.576	64.357	14.318	252.658
1962	89.793	90.720	96.400	34.000	310.913
1963	132.182	122.472	106.000	52.553	413.207
1964	175.176	122.093	110.000	62.143	469.412

TABLE — X

Tobacco Exports of Producing Countries
(in tons)

Year	Turkey	Greece	Bulgaria	Yugoslavia
1946	28.536	12.866	18.482	—
1947	42.293	14.553	32.662	—
1948	49.168	18.319	13.608	17.802
1949	77.625	27.666	30.608	11.878
1950	50.507	25.705	—	7.837
1951	57.828	31.473	—	6.274
1952	55.888	41.397	—	8.378
1953	71.659	48.958	—	6.142
1954	64.423	52.445	—	7.003
1955	60.009	54.868	31.258	14.690
1956	60.713	48.549	47.080	20.041
1957	88.469	69.000	47.195	16.072
1958	56.086	62.372	43.012	23.177
1959	66.793	55.987	62.087	16.156
1960	58.046	60.327	70.794	18.474
1961	84.075	65.720	63.706	17.000
1962	90.685	46.404	57.300	12.928
1963	46.781	61.210	—	—

Note : The above figures show the exportation of the calendar years.

TABLE XI

Principal Oriental Tobacco Producing Countries and Exports of Turkey

(1954 — 63)

Year	World tobacco exports (tons)	Exports by principal tobacco producing countries (tons)	%	Exports from Turkey (tons)	Exports from Turkey compared with world exports %	Oriental tobacco exports by Turkey and other countries %
1954	574.220	155.129	27,01	64.423	11,22	41,52
1955	623.039	160.825	25,81	60.009	9,63	37,31
1956	625.672	176.383	29,19	60.713	9,70	34,42
1957	674.231	220.736	32,73	88.469	13,12	40,07
1958	657.199	184.647	28,09	56.086	8,53	30,37
1959	636.944	201.023	31,56	66.793	10,49	33,22
1960	689.614	207.641	30,10	58.046	8,42	27.95
1961	760.039	230.501	30,32	84.075	11,06	36,47
1962	766.360	207.317	27,05	90.685	11,83	43,74
1963	746.098	178.219	23,88	46.781	6,27	26,24

Note : The above figures show the exportation of the calendar years.

Research

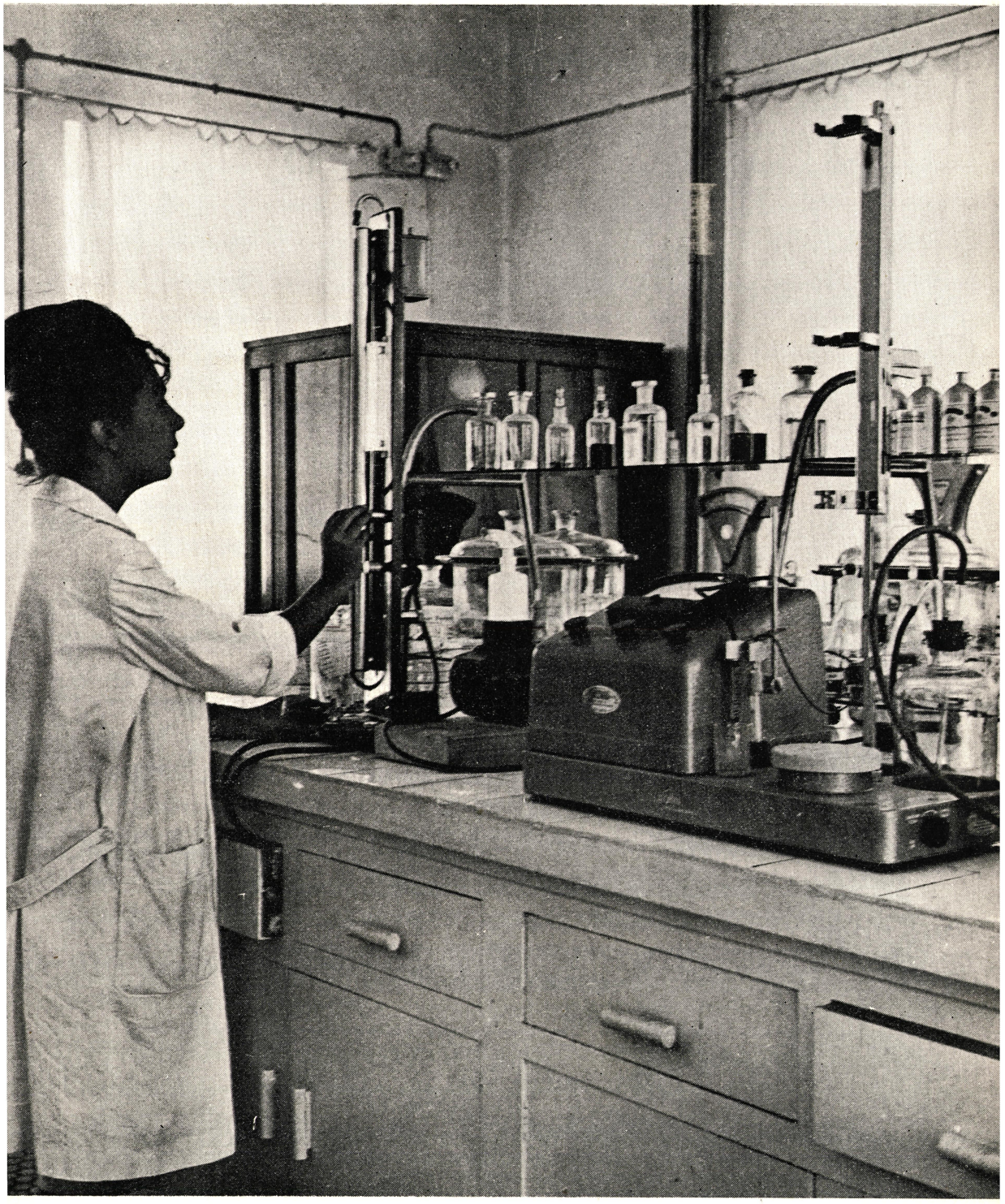
In Turkey the main centre for scientific research in tobacco is the Institutes of the State Monopolies, Cevizli, Istanbul. Some time ago, in addition to the above Institute, the Istanbul, Ankara and Ege Universities as well as the Ministry of Agriculture, started their own tobacco studies which are still being continued.

THE INSTITUTES OF THE STATE MONOPOLIES

In 1927 work began on an experimental station. As research became more extensive, the Tobacco Institute of Cevizli was established in 1935 to deal with the question of tobacco on a country-wide basis. Other improvement stations and experimental centres were set up in the country's important tobacco areas in support of the Institute's work and above all to facilitate the application of all results obtained. The production and distribution of improved tobacco seed was started. Subsequently the Institute was given its present name of the "Institutes of the State Monopolies" by annexing other laboratories which were under the State Monopolies. The Institutes have common administration offices and an extensive library.

Institutes of the State Monopolies are at present mainly concerned with the following subjects relative to tobacco:

Agriculture
Chemistry and technology
Biology
Genetics
Extension



Tobacco Agricultural Section :

The most important work of this section is the improvement of Turkish varieties and the protection of high quality seeds of pure origin.

Furthermore, experiments are undertaken on the adaptation of exotic types such as flue-cured and cigar tobaccos and research relating to morphological characteristics, drying processes, the effects of external factors and other subjects concerned with the agricultural stages of tobacco production is also carried out.

Tobacco Chemistry Section :

This section deals mainly with the examination of and research into the problems relating to the production and industrial stages of tobacco. These include the study of tobacco characteristics and their chemical changes which is the raw material of the cigarette industry. Studies are also made on the standardization of tobacco products and the control of manufacture accordingly, as well as smoke analyses and the determination of other characteristics of the products.

Biology Section :

On one hand this section deals with the problems of tobacco biology and on the other with the study of disease diagnosis, insects, and viruses, determination of combat methods and their application in the fields. This section also carries out studies on the control of tobacco warehouse insects and other diseases as well as the testing of new insecticides and their application.

Genetics Section :

This newly established section deals with studies on the production of disease resistant types, especially resistance to blue mould, by way of cross breeding.

Extension :

This section is charged with the collection of improved seeds of pure origin, the building of model seed beds and distribution of seeds and seedlings to the growers on a country-wide basis.

It is the duty of the technical personnel in this particular section to impart their knowledge to the grower and instruct him in the field on tobacco planting and plant protection.

In 1965 a total of 40,945 m^2 of seed beds and distribution areas were established. In the same year, 21,438 kg of seeds and approx. 88 millions of seedlings were distributed.

OTHER ESTABLISHMENTS

Ankara University :

At present, mutation experiments, aimed at output and quality, are being carried out under the supervision of the Industrial Plants Department, School of Agriculture. The effects of external factors on output and quality of tobacco are also being examined.

Ege University :

The Agronomy-Genetics Department of the School of Agriculture is carrying out research on the determination of agricultural measures to be taken in the seed-beds, with respect to combatting blue mould and obtaining species resistant to mildew.

Istanbul University :

Research is being carried out at present by the Pharmaco-Botanics and Genetics Department of the School of Sciences, on the subject of resistance to thrips, Disc method in peronospora research and the changes produced in tobacco by various external factors.

MINISTRY OF AGRICULTURE

Examinations and research into certain aspects of tobacco are being carried out in various departments of this Ministry. These are as follows:

Agricultural Research Institute, Yeliköy :

In 1962 a new study programme was started for obtaining species resistant to peronospora and work is still continuing on this project.

Another study is being carried out on the protection of the purity of seeds of pure origin, seed production and the growing of American type tobacco.

Furthermore, with the assistance of the Ankara University and the Nuclear Research and Training Centre, experiments have been undertaken in the production of mutant tobacco species resistant to peronospora by means of radiation.

Soil and Fertilizer Research Institute :

Fertilizer experiments are being carried out with the purpose of increasing the output without changing the quality of tobacco.

Plant Protection Institutes :

These establishments are concerned with fighting diseases, especially peronospora. At present research is being carried out on the determination of effective doses (or mixtures) of various germicides used against blue mould and their residues.

Education and Training

Due to the ever-increasing consumption of tobacco the world over, all governments are deeply interested in this product affecting the economic, as well as the financial and social aspect of the respective countries. The tobacco industry, affecting incomes, subsistence, health, pleasure and well-being of vast masses, must necessarily be managed by personnel who have passed through an education and training system in accordance with its importace. In Turkey, this matter has already been considered as important and continuous efforts have been made to train the necessary personnel in the various branches of the industry. These activities, relating to various stages of tobacco, may be grouped in the following two categories:

Education :

Education of tobacco experts

Training :

Training in tobacco production,
Training in tobacco processing and ageing,
Training in tobacco manufacturing.

EDUCATION

Eduaction of tobacco experts :

Formerly, personnel dealing with the buying, processing and ageing of tobacco were gaining their practical knowledge and experience by actually working on the premises.

Persons from different cultural levels and of varying professional knowledge which were employed in these fields as experts caused some

drawbacks and accordingly a training course with a regular programme was established in 1928 providing directives for tobacco experts and thus securing the necessary personnel. In this organization, a training course was established for graduates from secondary schools whereas in other countries the personnel performing the duty of tobacco experts were not undergoing a regular education of this kind. After the establishment of the Institute this has proven insufficient and in 1938 the necessary entrance level of education has been raised to high-school graduates, and the course for tobacco experts has been raised to five years. The education and training of experts has become one of the main duties of the Institute. During the five-year course of education, theoretical knowledge from tobacco planting to cigarette manufacturing, i.e. concerning the different stages, as well as practical studies, take up a great amount of programme, and the professional knowledge of the students is deepened. Lycée-graduate candidates are accepted to the Institute after two examinations, one written, concerning theoretical knowledge and the other verbal, on the ability of their sense organs. The first two years of the programme are referred to as the "course", and the subsequent three years as the "practice".

PROGRAMME OF EDUCATION

The present 5-year education programme is as follows :

First year : Tobacco growing - agriculture
Second year : Manufacturing
Third year : Processing of leaf tobacco
Fourth year : Ageing and fermentation
Fifth year : Evaluation and buying

TOBACCO GROWING - AGRICULTURE TERM

Tobacco group :

General instructions, tobacco agriculture
Turkish tobacco, world tobacco; practical studies.

Agriculture group :

General instructions on agriculture, ecologic factors, methods of improvement; practical studies.

Biology group :

Botanical and genetical aspects of tobacco, tobacco diseases, insects; practical studies.

Chemistry group :

Physics and inorganic chemistry, organic chemistry and biochemistry of plants, chemistry and technology of tobacco; practical studies.

Instructions in Juris - prudence.

Foreign language

MANUFACTURING TERM :

Blending and manufacturing
Industry economics and statistics
Foreign language
Practice in various branches of the factory.

Practice regarding processing, ageing, fermentation, evaluation and buying is put into application during subsequent terms. Theoretical knowledge concerning the above subjects is also provided during terms.

This establishment, active since 1938 has produced 255 graduates until now and the graduates are at present employed in Turkey in various jobs in the fields of grading, ageing, classification, processing stages of leaf tobacco, and manufacturing.

Students from abroad coming to the Institute are also accepted and trained as tobacco experts by undergoing the same education programme. Until now 6 students from other countries have graduated from this establishment over the years.

Recent developements in this field made it necessary that this establishment enjoyed a better reputation and it has been converted into

an establishment at university level, where an academic career can be studied. The Monopolies Management being aware of these requirements has drafted a new bill for the Tobacco Act, and incorporated in this bill the project of establishing a school where such a college degree can be obtained.

TRAINING

TRAINING IN TOBACCO PRODUCTION.

Seminars and short-term courses are prepared for providing the necessary knowledge to the personnel concerned with the production stage of the tobacco. These studies are grouped as follows:

— Seminars for technical and qualified personnel, holding jobs in the field of production and improvement of tobacco, are arranged from time to time with the purpose of providing knowledge relative to the new developments as well as planning the course of their studies. These seminars are attended by technical personnel working in improvement stations and area organizations operating in the tobacco production areas of Turkey.

— Technical personnel, attached to the Tobacco Branch, Ministry of Agriculture, and work on the subject of tobacco production, undergo a maximum of six months course in the Monopolies Institute to obtain a wider knowledge. Until now 62 technicians have undergone this training and have received certificates at the end of the course.

— When necessary, tobacco planters undergo training in model testing centres or directly at their own premises covering subjects such as special characteristics of tobacco planting and combating plant diseases.

— Separate training programmes are provided for technicians of foreign nationalities with the purpose of obtaining general knowledge on tobacco planting, and especially on the production characteristics of

Turkish tobacco. To attend these programmes the candidates may apply with the establishments in which they are employed or through Government channels of their own country. Up to now 22 technical personnel, coming from Iraq, Israel, Rhodesia, Sweden, Cyprus, Siam, Yuglosavia and Iran, have attended the courses or seminars and received certificates.

TRAINING IN RESPECT OF TOBACCO PROCESSING :

It is necessary that personnel employed as assistants to groduate-experts in the processing and ageing stages of leaf tobacco, such as tobacco storing supervisers, pass through the regular training programme. These persons must be able to understand all details regarding the correct performance of the established formalities for the judgement of tobacco qualities, development of the qualities, and determination of the results.

Training for this purpose may be grouped in two sections :

— Training at the premises for familiarizing the newly-employed workers with their jobs and for developing their capabilities of tobacco classification.

— Short-term training and practical studies for technical personnel of a higher level, for providing new information on the subjects of fermentation, ageing and evaluation of tobacco,

TRAINING IN MANUFACTURING OF TOBACCO :

Training of personnel of technically varying levels of knowledge, employed in the manufacture of cigarettes and other branches of the tobacco industry has in recent years gained much more importance especially with the accelerated tendency towards automation. The training to the required standards of knowledge of personnel employed in the operation, maintenance and repair of machinery and equipment of different kinds used in the tobacco factories, as well as the education of persons employed in other fields requiring specialization, such as classifiers of grades,

may be possible by attendance of training programmes in those premises, where these requirements are in demand.

This training, which is being directed rather within the industry's own structure and through its own staff, may generally be classified into 4 groups.

Orientation :

This programme, which we may describe as familiarizing and directing, deals with acquainting the new workers with the worksite and their jobs, who have recently entered the premises. In this training programme, which may continue for a week or fifteen days, the newcomer is familiarized with the preliminary knowledge regarding the establishment, the job he will perform, and the elements concerned with his job.

Training of supervisors :

In this group falls the training of personnel of all grades supervising small or large groups of workers, actually performing the production with machinery and equipment. The main subjects of this training programme are supervisory psychology, management of man, regulation of jobs, and control of work execution. If a new method or regulation is to be applied at the worksite, it is necessary that the supervisors must first realize the importance and nature of this new system. Training of supervisors may, when required, be made in the form of seminars of short-term programmes.

Skill improvement training :

In this group there may generally be two programmes. One being for the purpose of training the existing personnel to the level required by their jobs, and the other consisting of programmes arranged for teaching the special features of machinery, equipment or systems. The perfection course has as aim the gaining and acquiring of experience of the workers to the required level by means of programmes arranged according to work analysis. This may also include all of the staff of the pre-

mises. The terms of the programmes may vary according to the distance between the two determination points and to the degree of diffictulties in teaching the subject. However it is generally considered to be a short-termed training course.

Training of apprentices :

This comprises the training of young and unqualified workers who are to become foremen or technical personnel. Candidates, selected from among young persons with at least primary school education and eager to become master in any branch of the worksite, undergo a long-term training. The terms of the programmes may vary according to the branches chosen by the candidate. But generally programmes of 2 to 4 years are in force for trades such as electricians, mechanics, lathe-milling-machine workers or fitters. More than 90% of this programme is spent in the field of practice. The worker works under the supervision of his foremen and is trained while aiding production.

Tobacco Experts

Tobacco experts are competent and properly trained technical personnel who play an important role in the production, evaluation, processing, ageing and manufacturing, stages of tobacco. Experts in these fields have to acquire a thorough knowledge and training in tobacco - from the plant in the field to the finished product - covering the various stages of the tobacco industry. Tobacco experts, who form a uniform staff in the Turkish State Monopolies, undertake duties of a great variety, ranging from the supervision of the production of high quality tobacco by acquainting the producer with certain aspects of production techniques, to participation in scientific research studies. Furthermore, these experts hold responsible positions, both on the technical and administrative sides of the tobacco industry and contribute successfully to its improvement.

In order to maintain a satisfactory balance when estimating the production quality and evaluation of the crop it is necessary to combine the interests of the producer and consumer with the interests of the country. This responsibility lies with he tobacco experts. Great importance is attached to the achievement of this end which is only made posssible by correct and proper use of their evaluation measures. In a situation where mutual interests frequently conflict and where every kind of pressure can be exerted, an independent evaluation by the tobacco experts gives them a unique and specialized responsibility. The success of their skill is one of the most important factors affecting the tobacco production and the economics of the country. In addition, concrete measures should

always be taken to improve the quality of tobacco - from the seed bed to the manufacturing stage - and the tobacco experts are charged with the dissemination of the necessary information to all concerned in the tobacco industry.

During the storing, ageing, processing and manufacturing stages; both from the technical and administrative points of view the tobacco experts also play a leading role. They ensure the proper ageing of tobacco, its classification, blending and manufacture. By reason of the specialized nature of the various stages in the tobacco industry, the employment of tobacco experts in the supervision and direction of these activities has yielded more productive results, compared with those cases where only administrative staff were employed.

By reason of their specialization, tobacco experts have always worked within plants or processing sheds which benefits from their technical knowledge and contributes to the operation as a whole. The tobacco expert is always keenly interested in the latest developments and his efforts are continuously directed towards an improved standard of operation in accordance with the requirements of the day.

The responsibilities of the experts, which in earlier days were not strictly defined, have since been determined by laws and regulations. Provisions defining these responsibilities have been in force since 1938. Under the said provisions a licence must be acquired in order to practice as a "tobacco expert". The purchase, sale, and inspection of tobacco and appraising of the quality, value and type as well as any work relating to the processing of tobacco or to arbitration in cases relating to tobacco, can not be performed by persons without a licence.

The experts may be penalized by temporary or permanent suspension of their licence (prohibition form exercising their profession) during the course of their duties for reason stated below:

a) Causing damage to a person or establishment in the tobacco business;

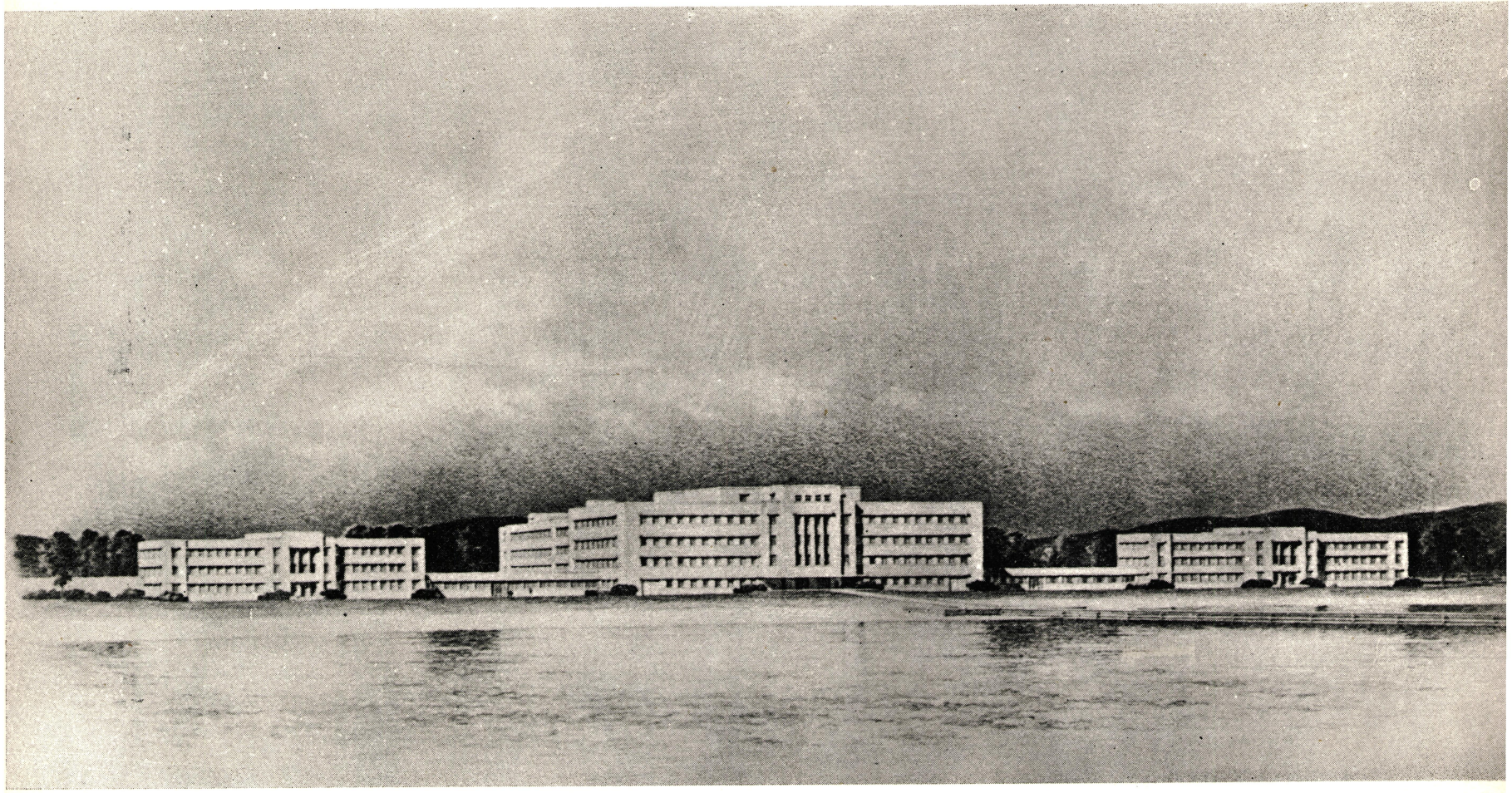
b) Exercising a false arbitration or determining wrong grades and values;

c) Giving wrong information to the buyers or those interested in tobacco;

d) Indicating a false origin of tobacco in reports on which the certificates of origin are based for export purposes;

e) Deliberate action which might unbalance the internal and external Turkish tobacco markets.

The duties of the experts have been widened by the ramification of tobacco research studies into specialized fields their speedy development, application of results, increase in production and demand from the point of view of the producer, manufacturer and consumer. These fields also embrace the development of sales methods and evaluation systems and especially expansion of mechanical devices affecting all phases of life, the creation of new branches of science and lastly the rivalries between producing and exporting countries. In view of the above their position is continually rising in importance in the tobacco industry and its relation to the economics of the country. For these reasons attempts are being made to give them o wide knowledge corresponding to a high level education.



Maltepe Tobacco Products Manufacturing Facilities

Professional Organizations

Persons dealing with tobacco in Turkey have become organized in various ways in order to secure the further development of the tobacco businesses within the country and to protect and develope the interests of those groups to which they belong.

Those dealing with tobacco may generally be grouped into four categories :

Tobacco planters,
Tobacco traders,
Tobacco technicians,
Tobacco workers.

The above groups have become organized under the form of societies, companies and associations.

ORGANIZATION OF TOBACCO PLANTERS

Organization of the planters in Turkey may be possible in two ways:

Organization in the form of an association, or
Organization in the form of a company

Organization in the form of an association :

The Ministry of Agriculture has assisted on a large scale in the realization of the desire of tobacco growers to get organized in the form of an association. Although not all studies on this matter have been completed it can be said that a result will be obtained in the near future.

Tobacco planters are at present organized in the form of "Tobacco planters' Associations",*(Tütün Ekicileri Birlikleri)* and "Tobacco plan-

ters' Federations" (*Tütün Ekicileri Federasyonları*) In the near future, however, the "Tobacco Planters' Confederation of Turkey" will be created by the incorporation of the associations and the federations.

The results to be obtained by the above three organizations are as follows:

1) Protection of rights and interests of the members;

2) Raising the cultural and standard of living level of the members by increasing their knowledge and professional abilities;

3) Securing of a close and productive co-operation among the associations and the federations;

4) Taking all kinds of measures that will benefit and serve the development of Turkish tobacco;

5) Co-operating with official and private establishments concerned with matters relating to tobacco;

6) Establishing and securing of the continuity of mutual understanding as well as harmonious and productive co-operation between the tobacco growers and the purchasers regarding the development of the tobacco quality.

Organization in the form of a company :

The conception of an organization of this form is due to economic reasons. In fact, marketing of tobacco by the growers has from time to time provided abnormal price fluctuations which gave cause for misgivings and complaints. The Government has not remained disinterested in these misgivings and complaints and have taken recourse to various protection measures.

Among these retaliations, first a premium of 5%, then of 4%, has been deducted from the sales proceeds of the growers' tobacco, the revenue of which was used in the creation of an establishment having as purpose the regulation of the sales market of the growers' tobacco and the actual organization of the growers. Subsequently this rate has been

lowered to 2% and the deductions have continued until 1957. Thus, contributions deducted from the growers in this manner amounted to approximately T.L. 100,000,000.

An Act, planning the formation of the "Turkish Tobacco Corporation" on the basis of the contributions deducted from the tobacco growers, came into force on March 29, 1950. This association was, however, discontinued due to the fact that it was not able to realize its aims and was therefore not to the satisfaction of its members.

During recent years, the Government envisaged the establishment of another organization, incorporating the "Agricultural Credit" and the "Agricultural Sales" Cooperative societies, who have achieved positive results with the growers.

The Government Bill prepared for this purpose under the title of "Tobacco Agricultural Sales Cooperative Societies, Local Societies and Society of the Tobacco Growers of Turkey" has at present been submitted to Parliament.

In this bill a three-graded organization has been planned: "Tobacco Agricultural Sales Co-operative Societies", "Local Societies" and with the participation of the tobacco growers in the Aegean, Marmara, Black Sea and the Eastern Districts, the "General Association of Tobacco Growers of Turkey". The purpose of this bill is to examine the subjects and problems of Turkish tobacco by way of securing the co-operation among the districts and taking the necessary measures for the development of tobacco, strengthening of the organization and taking of decisions to be enforced by the societies as well as the cooperative societies.

ORGANIZATION OF TOBACCO TRADERS

Traders' Associations :

Tobacco traders in Turkey were organized 30 years ago under the name of "Tobacco Merchants' Associations and Societies". At present

there are tobacco merchants' associations and societies in the eight main tobacco production areas:

— Ege Leaf Tobacco Merchants' Association
— *Ege Tütüncüler Derneği*

— İstanbul Leaf Tobacco Merchants' Society
— *İstanbul Tütüncüler Birliği*

— Bursa Leaf Tobacco Merchants' Association
— *Bursa Tütüncüler Derneği*

— İzmit Leaf Tobacco Merchants' Association
— *İzmit Tütüncüler Derneği*

— Samsun Leaf Tobacco Merchants' Society
— *Samsun Tütüncüler Birliği*

— Bafra Leaf Tobacco Merchants' Society
— *Bafra Tütüncüler Birliği*

— Taşova Leaf Tobacco Merchants' Association
— *Taşova Tütüncüler Derneği*

— Trabzon Leaf Tobacco Merchants' Association
— *Trabzon Tütüncüler Derneği*

The scope of activities and purpose of the traders' associations and societies are as follows :

1) Watching closely matters relating to the tobacco trade in the districts where they are organized.

2) Taking the necessary decisions and making attempts to remove local difficulties.

3) Securing further developments of the tobacco trade within the country in whatever manner thought necessary.

4) Securing of exports to world markets for tobacco as an important export commodity.

5) Increasing the effectiveness of decisions by combining local efforts and forming of a federation.

Of these establishments the Ege Tobacco Traders' Association and the Istanbul and Samsun Tobacco Traders' Societies are at the same time the registration authorities for export tobacco under the export regulations relative to Foreign Trade. They are in charge of duties relating to registration formalities, control of affairs specified in the regulations, and under the responsibility of the Tobacco Traders' Federation of Turkey.

Federation of Tobacco Merchants' Associations :

The above mentioned associations and societies have been united in 1952, forming an organization under the name of "Turkish Leaf Tobacco Merchants' Federation", *(Türkiye Tütüncüler Federasyonu).*

The scope and purpose of this Federation is to keep the tobacco, which is the most important export commodity of the country, on a more productive and useful level vis-a-vis the economics of the country. They also establish a harmonious and effective co-operation that enables the realization of this purpose among all associations, and societies of the Federation.

The Federation also controls the registration and activities of the Ege, Istanbul and Samsun associations and societies, being part of it, and is concerned mainly with tobacco exports according to the regulations in force.

ORGANIZATION OF THE TOBACCO TECHNICIANS

The tobacco technicians organization which will be explained in this section form actually the "Tobacco Experts".

The tobacco experts consist of personnel educated and trained in the best manner possible in the tobacco sector. The other technical personnel who are employed in the various stages of the tobacco sector are assistants to tobacco experts.

The assistants have organized themselves in other societies and unions, separately from the actual experts.

The tobacco experts, however, have got organized in the form of an association. At present there are two associations, one with its head office in Istanbul, whereas the ther is in İzmir.

The Istanbul Tobacco Experts' Association :

(İstanbul Tütün Eksperleri Birliği)

Formed in 1949 — head office in Istanbul — it has thirteen additional "representatives" in the provinces operating on behalf of the head office. Membership of this association requires an expert's diploma or certificate.

A great number of certified experts working in Government and private Sectors and almost all other experts with a diploma are members of this association.

This organization is the competent authority on the subjects relating to the tobacco sector and it participates in conventions dealing with it.

The specific purposes in the Statutes of this accociation are as follows :

1) Elevating the tobacco profession to the most useful degree in the country.

2) Spending efforts to realize all innovations which are deemed useful for the development of the century's tobacco.

3) Arranging of professional and scientific meetings and lectures.

4) Publicising professional efforts through books and magazines and when necessary by radio.

5) Creating of a harmonious co-operation between the colleagues.

6) Assisting the members in a professional, social and financial way.

The Ege Tobacco Experts' Association :

(Ege Tütün Eksperleri Birliği)

This is an organization formed by some experts with a certificate and by some personnel without a certificate, operating in the Ege district. Its head office is in Izmir. It does not have members in places other than the Izmir district and does not have any branches in any other places. All of its members belong to the private sector.

ORGANIZATION OF THE TOBACCO WORKERS :

Tobacco workers in Turkey have organized themselves in the form of trade unions. The trade unions are professional organizations formed with the purpose of protecting the common economic and social interests of the workers and developing their general knowledge. In these organizations, as well as in other organizations in Turkey, the segregation of colour, family, race, language, religion, sect, belief, political opinion or affiliation is of no consequence when becoming a member and benefiting from its services. The above mentioned rules have been guaranteed by law.

Formerly tobacco workers were members of trade unions formed by a certain section of the workers, dealing with the processing, ageing and manufacturing of tobacco. Subsequently, and especially after 1963, when the "Trade Union Act" and "Collective Bargaining Agreements and Strikes and Lockouts Act" came into force, this organization has in accordance with international norms expanded in such a manner so as to comprise also the labour force of the tobacco, beverages and food branches as well as auxiliary branches connected with the above.

It can be said that all tobacco workers, except those dealing with the growing, are organized under some form of trade unions.

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